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TELEPHONY

The Journal of the Telephone Industry

DECEMBER 1, 1945

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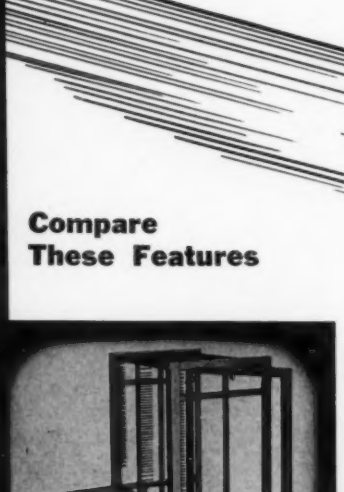

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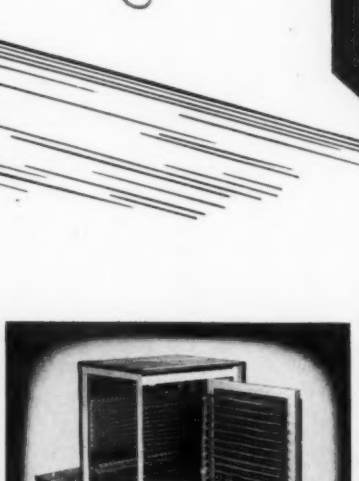

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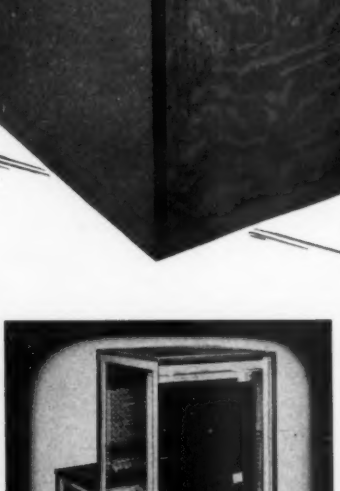

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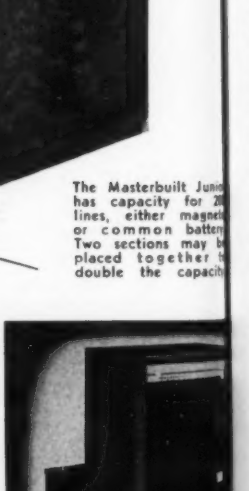

READY TO SHIP! Mast
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tion is done.

Rural Line Service

By John D. Taylor CONSULTING ENGINEER

Part I. The first of a series of articles describing present methods and suggesting new developments in telephone service to rural areas. Such subjects as rural line distribution, construction, transmission, inductive coordination, crosstalk and maintenance will be covered. Common battery and magneto service also will be discussed.

HISTORY tells us that Alexander Graham Bell discovered the principle on which the telephone is based on June 2, 1875. It also is recorded that his patent No. 174465 was not issued until March 7, 1876, and that the first complete sentence was not spoken by Bell and heard by Watson until March 10, 1876. Bell patents, although under continuous and severe attack, were held to be valid until 1894, at which time they expired.

During the period from 1876 to 1894, telephones were manufactured by Bell and his associates and were installed principally in the larger cities. Numerous individual companies were organized to serve specified territories, using telephones licensed by the Bell company. Despite Bell patents, the Western Union Telegraph Co. proceeded to install a total of 56,000 telephones in 55 cities. These finally were taken over by Bell interests in 1879.

Little use was made of the telephone in rural districts or in smaller towns during the early stages of telephone development, as these were regarded as unprofitable by the telephone organizations.

With the expiration of Bell patents in 1894, many small companies were formed, some to manufacture and others to operate telephones and associated equipment. These small operating companies began to serve the smaller towns and farming sections which heretofore had been practically ignored.

Prior to this time, the farm literally was an isolated unit telephonically. The farmer had no rapid means of communicating with his neighbors, trading centers or the outside world. Of necessity, the farmer had to rely on his own and his family's resourcefulness in dealing with sickness, fire, flood and other hazards to life and property. In those days, it often was necessary to travel over almost impassable roads via horse or horse-drawn vehicle, which at all times, was slow and uncertain. Frequently, because of such roads and the time consumed in travel, lives were lost and valuable property destroyed.

Under these conditions, the Independent telephone companies began to develop. The telephone introduced a new life to the farmer, both in social and business activities. Also, it provided a rapid means of communication when threatened with disaster. A higher plane of living was slowly, but surely being established for the rural districts by these early pioneering telephone companies. As the Independent companies developed and began to compete with Bell-owned companies, a rivalry rapidly assumed enormous and ruinous proportions for all concerned.

Generally, farms received telephone

John D. Taylor was born in Albia, Iowa, December 19, 1887. He attended grade and high schools in Kansas and Nebraska from 1892 to 1905, and was graduated from the University of Nebraska in 1909 with the degree of B.S.E.E.

Mr. Taylor was employed by the Northwestern Bell Telephone Co. in December, 1909. He started as a student in the plant department and worked on trouble, installation and construction. Later he served as wire chief in several large exchanges. Twenty-five years prior to his retirement on June 30, 1943, he worked on general plant engineering in Nebraska, Iowa, Minnesota and North Dakota.

Desiring to contribute his bit to the war effort after his retirement, he accepted a position with the Plant Engineering Agency of the Signal Corps in Philadelphia, Pa. While employed by the Signal Corps, he aided the development and use of the package-type carrier telephone system and other fixed plant communication equipment. He resigned from this position on June 30, 1945, to establish his own business as a consulting engineer in Philadelphia, Pa.

TELEPHONY indeed is fortunate in obtaining the services of Mr. Taylor who will present numerous problems and their possible solutions which are of vital interest to the industry in connection with providing rural telephone service.

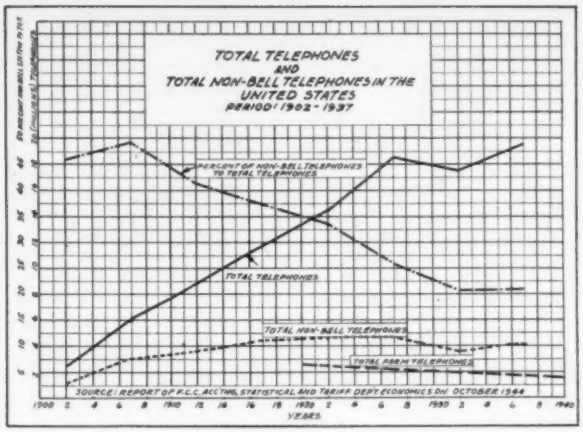


Chart 1

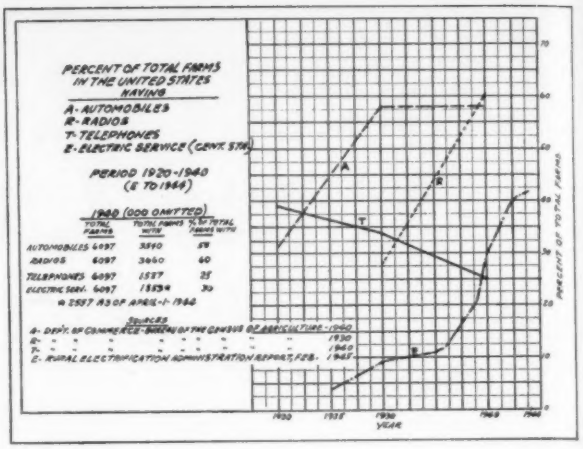

PERCENT OF TOTAL FARMS
IN THE UNITED STATES
HAVING
A- AUTOMOBILES
R- RADIOS
T- TELEPHONES
E- ELECTRIC SERVICE (CENT. STA.)
PERIOD 1920-1940
(E TO 1944)
1940 (000 OMITTED)
TOTAL FARMS
TOTAL FARMS WITH
% OF TOTAL FARMS WITH
AUTOMOBILES 6097 3590 58
RADIOS 6097 3660 60
TELEPHONES 6097 1527 25
ELECTRIC SERV. 6097 1853* 30
* 2597 AS OF APRIL-1-1944
SOURCES
A- DEPT. OF COMMERCE-BUREAU OF THE CENSUS OF AGRICULTURE-1940
R- " " " " " " " " 1930
T- " " " " " " " " 1945
E- RURAL ELECTRIFICATION ADMINISTRATION REPORT, FEB. 1945
PERCENT OF TOTAL FARMS
YEAR

Chart 2

service direct from extended town lines, but in many cases the farmers, themselves, grouped together to establish mutual or service line companies. These were owned and operated as an isolated system or with a connection to the nearest central office.

In 1894 farm lines were built by the Citizens Telephone Co. of Washington Courthouse, Ohio. In 1895, the People's Telephone Co. of Knox County, Ohio, installed the first rural telephones in Knox and Morrow counties.

In 1901 there were 2,750 exchanges and 700,000 telephones owned by Independent companies and located, for the most part, in the middle and northwestern states.

In 1902, the Department of Commerce reported that Independent and mutual systems had 998,119 telephones. Independent farm lines had 55,747 telephones, or a total of 1,053,866 as compared to the Bell-owned 1,317,178. Of the total exchanges, the Independent companies had 6,608 (63.8 per cent) and the Bell had 3,753 (36.2 per cent).

In 1904 it was announced that thousands of farmers were receiving weather reports by telephone.

It was reported in 1905 that Iowa had one-third of all farm telephones and one-fourth of all farm wire mileage in the country.

In 1918 farmers in many parts of the country complained of the telephone rates which, in the majority of cases, were being increased from about $1.00 to $1.25 per month. More than 500 increases were granted during the year to Independent and Bell companies and there were threats of organizing competing companies.

In 1920, Department of Commerce reports showed 2,500,000 farms with telephones in this country. About one-half of the farms in Illinois, Iowa, Kansas, Nebraska, Indiana, Missouri, Ohio, Minnesota, South Dakota, Wisconsin, Vermont, Connecticut, Massachusetts and Oregon had telephones.

Per Cent of Total Farms With Telephones in the United States

States	*1920*	*1930*	*1940*
New England States			
Maine	49	57	44
New Hampshire	50	63	52
Vermont	58	61	47
Massachusetts	52	65	54
Rhode Island	41	52	50
Connecticut	52	66	62
Middle Atlantic States			
New York	48	49	39
New Jersey	32	41	36
Pennsylvania	44	43	32
East North Central States			
Ohio	62	55	33
Indiana	66	61	45
Illinois	73	69	50
Michigan	50	44	28
Wisconsin	59	59	39
West North Central States			
Minnesota	62	62	45
Iowa	86	84	67
Missouri	62	54	39
North Dakota	47	41	28
South Dakota	59	54	34
Nebraska	76	73	43
Kansas	78	73	51
South Atlantic States			
Delaware	27	25	25
Maryland	25	28	31
Virginia	18	18	15
West Virginia	43	34	31
North Carolina	12	7	4
South Carolina	6	4	3
Georgia	10	6	4
Florida	8	6	6
East South Central States			
Kentucky	27	25	16
Tennessee	23	18	13
Alabama	15	8	4
Mississippi	10	5	3
West South Central States			
Arkansas	23	10	5
Louisiana	6	4	3
Oklahoma	37	26	18
Texas	32	20	13
Mountain States			
Montana	17	20	17
Idaho	33	38	29
Wyoming	28	28	24
Colorado	37	40	33
New Mexico	11	9	7
Arizona	16	19	15
Utah	25	27	20
Nevada	36	42	34
Pacific States			
Washington	42	45	32
Oregon	51	48	34
California	32	36	34

(Source: Department of Commerce, Bureau of the Census Agriculture—16th Census)

Table 1

By 1935, the Bell System owned and operated 13,674,000 telephones; connecting companies owned and operated 3,453,000 telephones. Bell System owned and operated 6,766 exchanges; connecting companies owned and operated 11,900 exchanges.

There were 6,700 connecting companies and 25,000 Bell-connected rural lines; also, there were 73,000 telephones not connected to the Bell System network.

Chart 1 shows the growth of the total telephones and total non-Bell telephones in the United States from 1902 to 1937. It will be noted that the Bell System station growth increased quite rapidly until 1927, at which time the number of stations were about 18.5 millions. However, 10 years later, the total had only increased to about 19.5 millions. The non-Bell telephones numbered four millions about 1915 and remained fairly constant between four and five millions from that time until 1937. On the other hand, farm telephones decreased from about 2.5 millions in 1920 to 1.5 millions in 1940. This decrease in farm telephones is shown by regions for the United States in the following table:

Number of Telephones on Farms and Per Cent Change Between 1920 and 1940 by Regions

Region	1920	1930	1940	Per Cent Change 1920—1940
United States	2,498,493	2,139,194	1,527,154	—38.9
New England	80,510	76,284	68,319	—15.1
Middle Atlantic	189,344	161,879	123,557	—34.7
East North Central	678,862	560,462	402,707	—40.7
West North Central	762,442	724,545	507,292	—33.5
South Atlantic	164,213	117,464	90,190	—45.1
East South Central	196,692	142,204	88,788	—54.9
West South Central	273,315	181,647	103,501	—62.1
Mountain	62,503	68,217	51,068	—18.3
Pacific	90,612	106,492	91,732	1.2

Note that the states composing each region are given on the *Table 1* series.

It is evident that the greatest loss of farm telephones between 1920 and 1940 occurred in the southern states. In the east north central region, a decline in the 20 years of 7.2 per cent in the number of farms was accompanied by a reduction of 40.7 per cent in the number of farms with telephones.

Table 1 shows by states (grouped by regions) the per cent of total farms with telephones for the years 1920, 1930 and 1940.

Chart 2 shows, for the years 1920, 1930 and 1940, the per cent of total farms in the United States having: A — automobiles, R — radios, T — telephones, E — electric service (central station for the years 1925 to 1944).

Farm automobiles increased rapidly between 1920 and 1930; radios increased, likewise, between 1930 and 1940 and electric service made remarkable progress during the period from 1925 to 1944. In marked contrast, telephone service on farms declined sharply from 1920 to 1940.

Table 2 (page 14) shows by states (grouped by regions) the same information as *Chart 2*, but for the year 1940 only. These charts are intended to indicate the relative standing of the four most useful services to the farmer, prior to the entry of this country into World War II. It readily is apparent that telephone service does not compare favorably with any of the other three services except in the west north central region and in five other states in other regions. In these, it exceeds the electric service only.

The net decrease of about 1,000,000 farm telephones throughout the United States between 1920 and 1940 may be blamed on a number of factors which vary greatly in their effects in different sections of the country.

It is not the purpose of this article to attempt to analyze the various causes of the rural telephone decline. However, it may be pointed out that, in general, economic conditions probably were the principal cause. During 1920 and 1930, a period of prosperity, there was a net reduction of only about 360,000 farm telephones as compared to about 640,000 during 1930 to 1940, the depression period. This condition existed, despite the fact that in the first 10-year period, the urban population increased at a rate six times that of the rural rate. During the years 1930 to 1940, the urban and rural rates of population increase were about the same.

Chart 3 shows the effects of the value of farm products on farm telephone service. It is clear that the farms with higher incomes made greater usage of the telephone.

Automobiles came into limited use during the years from 1900 to 1910. By 1920, 31 per cent of all farms had automobiles. The percentage of farms having this convenience increased rapidly and had reached 58 per cent by 1930. Between 1930 and 1940, there was only a slight increase in automobiles on farms. In the United States, state highway disbursements for 1921 and 1939 were about $397,000,000 and $1,127,000,000, respectively. The per cent increase in disbursements in each of the nine regions for these same years ranged from 88 per cent to 568 per cent. The poorer agricultural regions suffered the greatest farm telephone losses during this period, and also received the

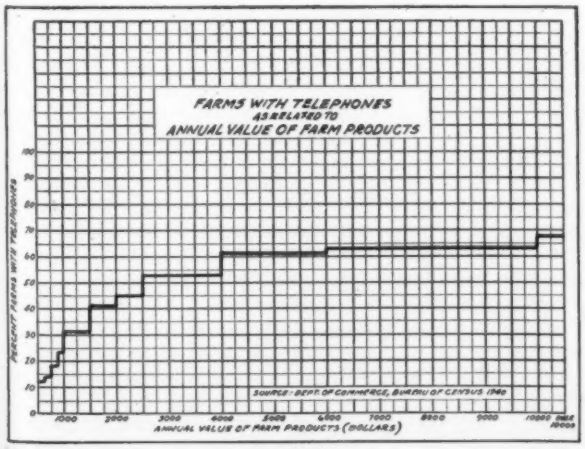

FARMS WITH TELEPHONES AS RELATED TO ANNUAL VALUE OF FARM PRODUCTS
PER CENT FARMS WITH TELEPHONES
ANNUAL VALUE OF FARM PRODUCTS (DOLLARS)
SOURCE: DEPT. OF COMMERCE, BUREAU OF CENSUS 1940

Chart 3

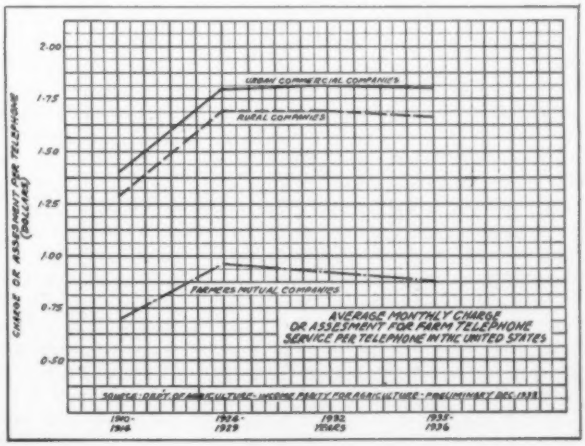


Chart 4

greatest per cent increase in these disbursements from 1921 to 1939. This may or may not be significant.

Radios came into general use in the years from 1920 to 1930, at which time 28 per cent of the farms were enjoying this service. By 1940, the percentage had increased to 60.

The average cost of telephone service to the farmer increased about 30 per cent from the 1910-1914 period to the 1924-1929 period for urban and commercial rural companies, and about 40 per cent for the farmers' mutual companies as shown on *Chart 4*. The latter companies were on the lower rate level. Even after the increase in rates, the costs of providing good service exceeded the revenues received.

From available records, it appears that the peak of rural telephone development was reached about 1920, although this date has not been established definitely. Whereas 2,498,000 farms reported telephones in 1920 and 2,139,000 farms reported telephones in 1930, only 1,527,000 had telephones in 1940. This represents a decrease over the 20 years of 39 per cent. The proportion of farms with telephones to total farms during the same period fell from 38.7 per cent in 1920 to 34 per cent in 1930 and to 25 per cent in 1940. Based on farm population, these data show a decrease from 79 telephones per 1,000 farm persons in 1920 to 71 in 1930 and to 50 in 1940.

The downward trend of farm telephones was marked most in the three southern regions, South Atlantic, East South Central and West South Central. In the 20 years from 1920 to 1940, the number of farms in the three regions declined 6.2 per cent, but the number of farms with telephones declined 55.6 per cent. From one telephone to every five farms in these regions in 1920, the ratio fell to one in every 11 farms in 1940.

While the proportion of farm telephones to farm population was declining in every state, except Maryland, the proportion of all telephones to all persons in the state increased in 25 states. In Georgia, the number of farm telephones per 1,000 farm population declined 40 per cent, but the total number of telephones per 1,000 population in the state increased about 17 per cent from 1930 to 1940. In Montana, for the same period, there was a 17 per cent decline in farm telephones and a 13 per cent increase in total telephones. These two states predominately are rural.

Of the 27,666,000 non-farm occupied dwellings in the United States in 1940, 46 per cent had telephones, while of the 7,189,000 farm-occupied dwellings, only 22 per cent had telephones. The potential market for telephone service, as of 1940, consisted of 14,900,000 non-farm and 5,700,000 farm dwellings, or 54 and 78 per cent respectively, of the total dwellings in each class.

1940 Percentage of Total United States Farms With:

States	*Telephones*	*Automobiles*	*Radios*	*Electric Service (Central Station)*
New England States				
Main	44	58	77	52
New Hampshire	52	65	81	66
Vermont	47	64	83	52
Massachusetts	53	62	91	82
Rhode Island	49	71	63	82
Connecticut	62	67	91	80
Middle Atlantic States				
New York	39	74	84	67
New Jersey	36	72	87	82
Pennsylvania	32	74	77	56
East North Central States				
Ohio	38	81	80	59
Indiana	45	81	77	49
Illinois	50	83	81	38
Michigan	28	82	84	70
Wisconsin	39	84	83	47
West North Central States				
Minnesota	45	88	85	25
Iowa	67	90	88	34
Missouri	39	64	60	15
North Dakota	28	83	87	4
South Dakota	34	86	81	6
Nebraska	43	89	77	19
Kansas	51	83	78	18
South Atlantic States				
Delaware	25	76	72	39
Maryland	36	71	94	41
Virginia	15	43	47	24
West Virginia	20	35	56	25
North Carolina	4	42	46	24
South Carolina	3	43	31	20
Georgia	4	33	33	20
Florida	6	39	39	25
East South Central States				
Kentucky	16	35	49	15
Tennessee	13	32	47	16
Alabama	4	20	31	15
Mississippi	3	18	28	9
West South Central States				
Arkansas	5	21	40	10
Louisiana	3	21	27	11
Oklahoma	18	57	54	11
Texas	13	60	49	19
Mountain States				
Montana	18	73	80	19
Idaho	29	75	83	58
Wyoming	24	73	74	23
Colorado	33	80	74	29
New Mexico	7	40	37	13
Arizona	14	43	44	30
Utah	20	60	63	69
Nevada	34	66	75	44
Pacific States				
Washington	32	75	86	71
Oregon	34	79	81	59
California	34	80	84	81

(Source: Department of Commerce, Bureau of the Census, 16th Census of the U. S.—1940. Department of Agriculture Report—REA—February, 1945)

Table 2

From the summary of data available, it is evident that there was a sharp decrease in farm telephones from 1920 to 1940 amounting to about 1,000,000 telephones, or 39 per cent, of which 25 per cent occurred between 1930 and 1940. Thus, in 1940, of the 6,097,000 farms in the country, only 1,527,000, or 25 per cent, had telephones.

While records are not complete, it appears that at the peak of farm telephone development, about 1920, there were about 2,500,000 farm telephones. From that date until 1940 (last federal census for which data presently is available) there was a steady decline to about 1,527,000 farm telephones. Bell System rural telephones have increased steadily since their low point in the 1930's, indicating pronounced decrease in non-Bell owned rural telephones.

These data further indicate that economic conditions on the farm have a very definite effect on the use of farm telephone service. The 1940 federal census shows that where the annual value of farm products was less than $1,000, only 23 per cent of such farms had telephones, whereas, for annual values of $4,000, or more, the percentage of farms with telephones exceeded

(Please turn to page 35)

Current strikes in utility fields have increased desire of Congress to enact legislation protecting public in differences between labor and management. . . . Treasury Secretary Vinson opposes rural telephone legislation in statement to congressional committees.

CURRENT strike troubles, including the recent telephone strike in Illinois, have had the effect of putting Congress into a mighty testy mood. The result could be the enactment of disciplinary legislation directed at unions which never would have been seriously entertained a year ago or even a few weeks ago. As is so often the case in dealing with human nature, Congress did not seem to get worked up over the strike situation until it struck home right in the city streets of Washington, D. C.

Experienced observers have estimated that the recent streetcar and bus strike, which tied up transportation in the nation's capital, for two periods of 36 and 18 hours, respectively, did more to harden the congressional temper on the subject of disciplinary legislation than all the more important and serious walkouts which have occurred and are occurring elsewhere in the country. The business of the federal government was slowed down to a mere snail's pace. The ordinary routine of life in Washington was made miserable with the terrible inconvenience of nearly a half million workers walking or hitching rides or simply not going to their offices. Needless to say, the congressmen felt this in their own offices and daily affairs.

This writer took an informal survey of newspaper editorials resulting specifically from the transportation strike in Washington and the telephone strike in Illinois. There would seem to be a sharp increase of sentiment for distinguishing between utilities and non-utilities in enacting such anti-strike legislation. Chicago and middle western papers, for the most part, pointed out that the public should not be inconvenienced by the stoppage of such vital and essential service as that rendered by the public utilities, simply because of a difference between labor and management. Whether this approach is right or wrong, the trend seems to be towards making such a statutory distinction. Hence, the common prediction that if we have much more labor trouble in the utility field, it is quite likely we will have compulsory arbitration legislation for the public utilities sooner than was expected.

The bills recently reported out by the House Rules Committee are pretty angry bills. They would impose the following restrictions on labor:

(1) Labor unions which violate no-strike contracts would forfeit their bargaining rights for a year and become liable to suits for damages by their employers.

(2) Money contributions by organized labor to influence elections, including primary and party conventions, would be made unlawful.

(3) The Hobbs Bill (separate from the House Rules Committee bill) would make unions and their members liable to federal anti-racketeer law penalties which apply to other organizations or persons if they obstruct interstate commerce by robberies or extortion.

(4) Other bills are aimed primarily at Musicians' Union Czar Petrillo and expressly would apply the Sherman anti-trust law and other laws against unfair trade practices to union activities. This would overcome the decision of the Supreme Court exempting labor unions from such anti-trust prosecution.

(5) So far no special measure for establishing compulsory arbitration in the public utility field has been introduced with the exception of the important Ball-Burton-Hatch Bill, which was dropped in the hopper several months ago and reviewed in this department. The utility arbitration feature was only one of numerous provisions of the Ball-Burton-Hatch measure, which is itself so extensive that it is hardly likely to make rapid progress at this time.

* * *

It was Secretary of Treasury Vinson who politely has knocked the remaining props supporting the chances for rural telephone legislation becoming law in Congress this year. As in the case of Secretary of Agriculture Anderson, the treasury secretary was asked to report to the congressional committees on the various bills to install federal financing of rural tele-

phone installations and improvements. But unlike Anderson, Secretary of Treasury Vinson does not think much of the plans and his gentle criticism should go a long way towards blocking any attempt to move these bills further along.

Referring to HR 1297 and HR 1665 —the two bills in the House on this subject—Vinson stated:

"The proposed bills relate to matters of primary concern to departments and agencies other than the treasury. However, certain fiscal provisions of the bills are of sufficient importance in connection with the work of this department to warrant particular comment.

"Section 3(a) of HR 1278 would authorize and direct the Reconstruction Finance Corp. to make loans to the administrator of the Rural Telephone Administration established by the bill. The loans could not exceed the aggregate amount of $50,000,000 for the fiscal year ending June 30, 1945, and for each fiscal year thereafter as Congress may from time to time determine to be necessary. In late 1941, the Treasury Department adopted the policy of encouraging government corporations and credit agencies which were authorized to issue guaranteed obligations of the government to borrow directly from the treasury. In line with that policy the treasury has been purchasing the notes and advancing funds to the Reconstruction Finance Corp., the Home Owners' Loan Corp., the Federal Farm Mortgage Corp., and other agencies. That consolidated program of financing unquestionably has promoted a more effective handling of the borrowing and money market problems of the United States and its agencies during the war. It would appear, therefore, that the purpose of economical over-all financing of the government would be better served if the funds needed by the proposed Rural Telephone Administration were secured directly from the Treasury Department. The Reconstruction Finance Corp. merely would serve as an intermediary in the proposed transaction and the department believes that direct appropriations from the treasury would be more desirable."

Vinson found fault with the low rate of interest which one of these bills would allow for loans to rural co-operatives and others to go into the telephone business in rural areas. Vinson's statement to Congress said on this point:

"Section 3(a) of HR 1278 further would provide that the rate of interest on sums borrowed by the administrator shall be 1¾ per cent per annum. If this method of financing is adopted, the department believes that the computed rate of interest on the public debt represents a more accurate index of the cost of borrowing money and suggests that the computed rate of interest for the end of the fiscal year preceding that in which the transaction occurs be used to determine the rate of interest on loans to the administrator. The computed rate of interest on the public debt is the average annual interest payable on all outstanding indebtedness as of a particular date. That rate at the close of each of the past few fiscal years has been as follows:

June 30, 1940	2.583%
June 30, 1941	2.518%
June 30, 1942	2.285%
June 30, 1943	1.979%
June 30, 1944	1.929%
June 30, 1945	1.936%

"Section 4 of the bill would authorize the administrator to make loans to carry out the provisions of the legislation. Such loans would bear interest at the rate of 1¾ per cent per annum. The rate in the bill as it now stands is less than the computed rate of interest on the public debt at the present time and would in effect amount to a subsidy. The department believes that a fair rate of interest on loans by the rural telephone administrator would be the computed rate of interest on the public debt plus a differential at a rate to be fixed by the Congress to cover the estimated cost of administration, potential losses and other contemplated expenses."

As between the two bills, Secretary of Treasury Vinson seemed to think that HR 1665, which would give the proposed authority to REA, would be a more sensible arrangement than HR 1278, which would set up a new agency to handle this matter. However, it was apparent that he thought the choice merely one of the lesser of two evils. In plain words, he didn't think much of either. He concluded:

"Finally, since the two bills would appear to involve substantial expenditures, they should be considered in light of the heavy demands on the treasury which have grown out of the war and the prospect of further large demands growing out of postwar readjustments.

VETERANS WANT TELEPHONE WORK

DURING the past few years TELEPHONY has received letters from numerous Signal Corps men, expressing a desire to enter the telephone business after they have been discharged and asking for our cooperation.

In an effort to be of assistance to returning veterans, as well as to telephone companies which have a manpower shortage, we expressed to the Office of the Chief Signal Officer of the Army our willingness to publish the names and addresses of Signal Corps men who desire to enter telephone work. The Chief Signal Officer accepted our offer and advertisements were run in the post papers of Fort Monmouth, N. J., and Camp Crowder, Mo., announcing our plan. To date we have received letters from the following Signal Corps men, asking that they be listed. It is suggested that any telephone operating or manufacturing company desiring men with their qualifications write them immediately.

* * *

G. A. JACKSON, R. R. 1, CHARLOTTE, TENN. Interested in position with operating company as teletype repairman. Completed four-month course in teletype repair at Ft. Monmouth and has had two years' experience in installation, maintenance and repair of such equipment. Married, age 24; two years' college.

* * *

CASIMIN F. OZGA, 235 DAY AVE., CLIFFSIDE, N. J. Discharged from Signal Corps, experienced in work of Signal Corps board at Ft. Monmouth in development of telephone equipment. Was a section chief of the board for four years.

* * *

NICK BATTERMAN, JR., 3 S. WINDSOR AVE., ATLANTIC CITY, N. J. Expects to be discharged from Signal Corps in December and plans to settle in Southern California. Worked in Signal Corps as an 097 installer-repairman and also was instructor in repeater and carrier courses.

* * *

WESLEY M. ROHRER, JR., 200 MABEL ST., JOHNSTOWN, PA. Expects to be discharged from Signal Corps in December. Experienced in maintenance of electronic equipment and is interested in position dealing either with the manufacture or maintenance of such equipment.

* * *

HAROLD J. HELMER, 3612 CROSBY PLACE, S., MINNEAPOLIS 6, MINN. In Signal Corps two years and has had experience as an installer and repairman; has done some work on carrier equipment. Interested in position dealing with manufacture, installation and maintenance of telephone equipment.

The credit resources of the government must be conserved for those important purposes."

* * *

The communications industry generally will be basically interested in a bill now being drafted by the counsel for the House Committee on Un-American Activities. It would amend the Communications Act so as to provide for stricter supervision of radio broadcasters. The measure, which Ernest Adamson said he was preparing for committee consideration, drew prompt opposition from without the committee. As Adamson explained it to reporters, his proposal would specify that:

(1) Radio stations must clearly identify commentators, including an announcement whether they are reporting news or opinions.

(2) Radio stations must have a legal agent in each state, so they can be prosecuted through the courts of the state by any person damaged by their broadcasts.

Rep. Ellis E. Patterson (D., Calif.) promptly issued a statement terming the proposal "an unconstitutional attempt . . . to control the airways."

Adamson denied this. He said: "We do not want to control or gag anyone. We just desire to provide for closer regulation of wild, irresponsible analysts and to make a clear distinction between news and prejudiced viewpoints."

Adamson added that in reply to letters he had written, the lawyers of "all but one" national radio network had agreed "there is room for improvement in the broadcasting of news and news analysis."

Adamson said the lawyers urged that stations be allowed to work out improvement through self-regulation, but he doubted this would work satisfactorily without federal supervision. Adamson said:

"We'll have to require in some way that the stations write up rules and regulations and file them with the Federal Communications Commission and then have the FCC see that they adhere to them. This would put the radio industry in the same relation to the FCC as the railroad industry is to the Interstate Commerce Commission."

Adamson said the legal agent idea is needed "to put radio stations in the same position as newspapers when they make mistakes." He said that at present, when broadcasts damage a person, he must seek legal redress in the state where the station is located.

Another radio broadcasting development which may have more direct effect on telephone company operations is the proposal mentioned in this department some weeks ago to have television broadcasts made directly from stratospheric airplanes flying at high altitudes over continental United States. It is estimated that a mere handful of these flying television broadcasting stations would blanket the entire country, because the angle of the television transmission from such a height would cover a ground area circle of 400 miles or more in diameter. Compare this with the mere 40 or 50 miles' "line of sight" limitation on television broadcasting from high buildings and towers and we shall see that if this so-called "stratovision" technique proves out, it is going to mean a lot more television programs in areas of the country which otherwise would be slow to get it, if they ever got it at all.

Furthermore, since these stratospheric planes would relay the signal to each other program and network, cost could be cut down considerably as compared with the much larger area served. This would sell more television sets, of course, and the owner of a receiver in some remote place would get just as good reception as someone living in a larger city. More than that, he would have just as wide a choice of programs.

Where this bears on the telephone industry is simply this: When the FCC announced its radio allocations on the spectrum several months ago, it made a number of provisions for so-called shared frequencies whereby telephone companies could use radio frequencies otherwise assigned to television in the absence of the latter local operation. As the television technique stacked up then, it appeared highly problematical whether television would ever get out to some of the more wide-open spaces where smaller Independent companies operate principally.

At any rate, it would take a number of years during which telephone companies might have much experience and opportunity with radio uses such as short-haul toll relay, rural telephone service, etc. It was even thought that if the telephone companies could get started fairly soon and operate such radio-telephone services for their own subscribers successfully, a public demand would be built up which eventually might foreclose switching such frequencies to television in subsequent years.

But the stratovision proposal, if it is sound, knocks that rosy dream out the window. For reasons already stated, stratovision will bring television to the entire country, just about as quickly as to New York, Philadelphia, Chicago. Just what effect this might have on the coaxial cable system which might otherwise be used for relaying television broadcasts is another issue still up in the air.

Improving Farm Telephone Service

The telephone companies of the nation have been experimenting quietly with the problem of running telephone lines on electric light poles. In the past, the noise caused by power lines has made this combination service on one pole unsatisfactory.

During the war period, while it has been impossible to get equipment to make telephone extensions in rural areas, electric companies and telephone companies have been carrying on experiments to provide telephone service to rural homes after the war by utilizing existing power line poles, and thus save the expense of building a separate pole line.

*One of many such tests is being conducted by the Alabama Power Co. and the Southern Bell Telephone Co. Indications are that the practicability of the plan will be demonstrated. There will be "bugs" to be worked out in certain special safety and service equipment, which will require time, but now it seems almost certain that as equipment and instruments become more plentiful, dependable telephone service carried on power poles in rural areas, will become as commonplace as dependable electric service.—**Industrial News Review.***

Uphold American Traditions at Home

John R. McCarl, for 15 years comptroller general of the United States, says "Send strong men to Congress. A weak Congress imperils the nation. A strong Congress, sustained by an informed, interested and alert citizenry, protects freedom and is vital to national safety."

MANHOLE PREFABRICATION

S. R. SWANSON, Plant Superintendent

Michigan Associated Telephone Co.

Muskegon, Mich.

TELEPHONE manhole construction methods today are much the same as they were 30 years ago. The same standard designs of brick or concrete construction still are followed throughout the industry, and fabrication is at the site.

Present practices have necessitated making and guarding an excavation for several days, with the attendant costs of a bricklayer's services or the erection and dismantling of forms if the hole is to be of concrete construction. In concrete construction, the forms are hand-tamped during pouring and reinforcement consists of various materials, some of which usually are scrap messenger wire, etc. The hand work on the job sometimes results in imperfections, and is time consuming. Under present-day material and labor costs, manholes constructed on the job cost upwards of $250 each.

During the past several years of war, prefabrication has been used with success in the construction of ships, buildings and in other ways too numerous to mention. The Lamar Pipe & Tile Co. of Grand Rapids, Mich., for several years successfully has been precasting concrete catch basins and storm sewer sections, which have met highway construction specifications and withstood heavy truck traffic.

Faced with an acute shortage of manpower and the necessity to embark on a sizable underground construction project, the idea was conceived of applying prefabrication principles to telephone manhole construction. The Type "B" manhole was selected for experimental purposes. Drawings were prepared simplifying the design to one adaptable to mass production methods and minimum costs. These drawings were submitted to the Lamar Pipe & Tile Co. to see if prefabrication would be possible. With the wholehearted cooperation of J. W. Carson of that company, the steel reinforcing design was worked out and suitable moulds designed from channel steel.

The initial results were encouraging and gave promise of a wide use of this type of construction by the wire using companies.

The drawings and photographs accompanying this article illustrate the initial effort. It will be noted that the manhole consists of a base, three vertical sections and a roof. The center section is fabricated in two interchangeable parts.

Only two moulds are required, one for the vertical sections and one for base and roof. The roof of the manhole is 6 ins. thick, the walls 4 ins. and the base 3 ins. This reduction in wall thickness is permissible in view of the heavier reinforcing, the fact that the moulds are machine vibrated during pouring and because the resulting casts are steam cured. These factors could not be introduced where the manhole is fabricated at the site.

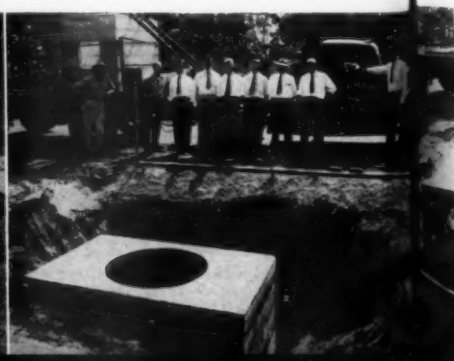
The manhole roof is reinforced with welded ½ in. steel rings in the concrete around the hole, with the remainder of the reinforcing ¼ in. cold drawn steel wire mesh on 2 in. spacing with the addition of ½ in. reinforcing bars, four located on each side of the hole for the length of the forms and two located on each side of the hole for the width of the form. The ½ in. rods were welded to the steel rings at the point of intersection, and the entire precast roof will withstand a computed load of 14,000 lbs. at the unsupported center with supports at each end.

The vertical sections were reinforced with 2 in. x 6 in. No. 7 cold drawn steel wire mesh and have a strength sufficient to withstand 5,000 lbs. side pressure through the center, and a top pressure of 4,500 lbs. per square inch.

The base section has reinforcing similar to the roof but with ¼ in. reinforcing bars, instead of ½ in. The estimated breaking load is about 6,000 lbs. at the unsupported center.

The several sections were designed with a tongue and groove joint so that waterproofing as well as to hold the several sections in alignment could be accomplished through the use of roofing mastic.

Initially, for this experiment, six holes were prefabricated of the type described. The cost of these holes was, of course, higher than might be expected on a production basis, as the cost of the moulds had to be absorbed; but even so, the cost was $110 per manhole delivered at the excavation and it is estimated that this cost on subsequent orders might be brought as low as $70. The delivery distance in this instance was about 45 miles from fabricating plant to construction site. The costs would, of course, vary with the delivery distance, but on the basis of the aforementioned price, it is estimated that a



S. R. SWANSON

prefabricated manhole can be installed approximately 20 per cent cheaper than one fabricated at the site. The particular project described was contracted to the Muskegon Construction Co. of Muskegon, Mich., on a cost plus basis.

It is felt that the experimental design illustrated here can be further refined for greater utility. For example, if a riser were necessary from the hole pictured, it would be necessary to pierce the wall at the desired spot with hand labor. This can be avoided by inserting a sand core at the desired spot in the mould, later sealing the resulting opening with a concrete plug until its use is required.

In the experimental installation, the duct run was brought to the outside wall of the precast hole and centered to the end openings provided in the center vertical section. Concrete was then placed by hand around the opening to seal the hole and provide a recess. Pulling-in irons were laid at the bottom of the center section openings and sealed into place with the hand placed cement used to recess the duct. A refinement of design would be to have the pulling-in irons prefabricated in place in the lower vertical section.

In the project described, holes were drilled by hand and expansion shields used for the machine bolts holding the cable racks. In refining the design, the machine bolts will be prefabricated in the proper locations in the side walls. No doubt, there are other improvements that can be made to increase the utility of the prefabricated manhole.

On August 20, 1945, the photographs accompanying this article were taken during an assembly demonstration of the prefabricated manhole at North Muskegon. In timing the operation, it was found that a hole could be erected in a prepared excavation in 28½ minutes. It would be possible with this type of construction to open and close an excavation in less than half a day, which would be a considerable advantage where traffic conditions and other hazards must be contended with. It also is possible with this type construction to obtain a tougher, harder concrete than would be possible in hand-tamped work.

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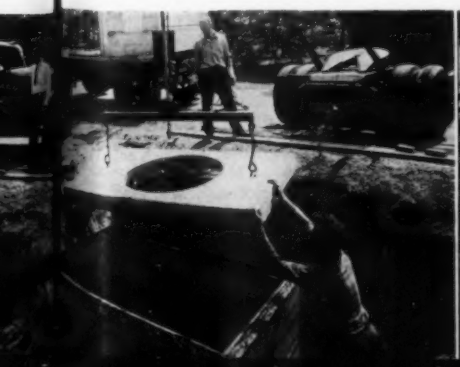

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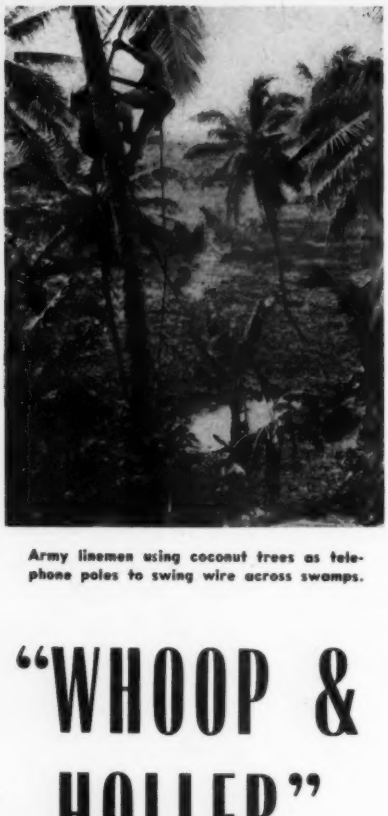
FIG. 1: The excavation is leveled to receive the base. FIG. 2: The base is lowered by a powered "A" frame. FIG. 3: The base in place. FIG. 4: The first vertical section is lowered. FIG. 5: The first vertical section in place and mastic sealer being applied to receive the next section. FIG. 6: The third vertical section is lowered into place. FIG. 7: The roof is lowered into place. Note second manhole loaded on trailer. FIG. 8: The hole is ready to receive the frame and cover. Standing (left to right): M. Bogema, foreman, Muskegon Construction Co.; truck operator; J. W. Gorson, sales manager, Lamar Pipe & Tile Co.; E. W. Husted, western district engineer, Michigan Associated Telephone Co.; E. R. Ellis, Elkhart plant supervisor, Indiana Associated Telephone Co.; C. C. Whitlock, assistant chief engineer, Indiana Associated Telephone Co.; H. R. Christianson, vice president and general manager, Michigan Associated Telephone Co.; C. F. Phillips, president, Muskegon Construction Co.; S. R. Swanson, Michigan Associated Telephone Co., the author. FIG. 9: Manhole frame and cover in place. The men shown here are the same as those in Fig. 8 with the exception of the two workmen, first and third from the left. FIG. 10: Showing trench and duct entrance in completed manhole.



Army linemen using coconut trees as telephone poles to swing wire across swamps.

"WHOOP & HOLLER" TELEPHONE CO.

DONALD J. MORTON, electrician's mate 3/c, USNR, Navy Seabee of Newhall, Calif., using a coconut tree as a telephone pole.

ANYTHING over 20 feet away was long distance and all circuits were "toll" lines when the Marianas Islands "Whoop & Holler Telephone Co." opened for business immediately after D-day.

The connotation "whoop and holler" is obvious. All they had were battery-operated field sets, wet wires, poor connections, a loud voice and patience. Thus began the Joint Communications Activity—a telephone and cable system that now could service the population of Nevada.

Complete communication coverage of one entire island was of utmost importance to invading American forces and communications men from four services teamed together in months of imperiled work against terrain, Japanese snipers and salvaged, but shrapnel-damaged, cable and captured equipment.

The Joint Communications Activity was organized of picked men from the Army Signal Corps, Marine wire battalions, regular Navy and telephone men from Navy Seabee battalions, under command of Maj. James F. MacLennan, Army Signal Corps, of Elmhurst, Long Island, New York. Major MacLennan, a veteran of the early Pacific war —Australia, Guadalcanal and New Guinea—had 36 months of overseas duty behind him.

Assigned to the JCA unit by Seabee activities was Lieut. A. H. Hasse, Civil Engineer Corps, USNR, Colorado Springs, Colo., on leave from the Mountain States Telephone & Telegraph Co. Lieutenant Hasse, veteran of the Coral Sea, Savo Sea, Guadalcanal and Tarawa battles, was communications officer aboard the cruiser Chicago when it was sunk.

First big task in the over-all picture was salvage to determine what material and equipment had been left on the island. Salvage crews searched the island's largest town and found that the Japanese had dispersed what telephone equipment they had in small caves. Before the enemy occupation of the island, Americans had installed a complete underground cable system to the point that all lines were placed and required only splicing in the manholes. The Japs did not complete this work or, in fact, make any use of the system at all.

The original American poles, or the 80 per cent of them which had withstood the preliminary Naval bombardments, were sprinkled heavily with shrapnel and shell fragments. Some field telephones were found but were of poor construction. Practically all the equipment that was of Japanese manufacture and had not been copied from American specifications was of poor quality.

In one town, the salvaging American crews found a pillbox telephone exchange with a Jap switchboard almost identical with American makes. The board, made by the Oki Manufacturing Co. of Tokyo, was put into operation almost immediately. The Japs had made such a thorough copy of the Western Electric board that parts and replacements, according to exact specifications, could have been ordered from one catalog—using the same number. They had not only copied the switchboard, but the catalog as well!

Largely, however, the Japanese appeared to have relied on existing telephones, using only single wire outlets to their outposts and guards. The JCA crews pulled cable that had been in airstrip conduits two years. In good condition, it was reclaimed and now is in operation.

As north and south combat troops converged, communications men followed, stringing miles of field wire to maintain contact between command headquarters and advancing troops. The telephone men were exposed to almost constant danger of sniper fire and artillery, yet contact was maintained at all times.

Once the Japanese were driven from one of the main airstrips, the communication crews moved in. Using 18-

gauge stranded field wire, the crews employed native labor to tie the 25-pair twisted wire in mile lengths. This was placed on trucks in "figure 8" position and paid out along the airstrip with unusual speed. Palms and coconuts were used as poles when possible. Nearly 385 miles of field wire were strung along this single airstrip.

Working day and night, the men installed at the island command post a test station to handle tactical exchanges. Switchboards were installed using BD-96 common battery and magneto combination. A main distributing frame was made from salvaged brass bed rails and 20-gauge stranded steel wire for jumpers.

Another operation involved laying of 58,000 ft. of cable across two mountains, through jungle, swampland and rice paddies. Here again the crews had to contend with Jap snipers. When pipe and ducts were not available, the crews used parkway subterranean cable—conductors in a lead sheath, impregnated with tar and paper, then wrapped with two spiral tapes and finally covered with impregnated jute. This type was ideal under prevailing conditions.

It was during this operation that Henry C. Robertson, electrician's mate 1/c, USNR, a Seabee cable splicer from Oklahoma City, splicing cable in a trench, was caught between Jap sniper fire and the return fire of Marine patrols. "I never felt so big in my life," he said. "All I had with me was a small pair of pliers." A nearby Marine patrol saved the situation, killed three Japs, and Seabee Robertson went back to work with a Marine as guard.

Crews in charge of George T. Templin, electrician's mate 1/c, USNR, Denison, Tex., and W. L. George, electrician's mate, 1/c, USNR, San Antonio, Tex., were laying 4,600 ft. of cable up a mountain, but when the job was completed, tests revealed a break. Isolated Japs had sneaked out of the jungle after the cable laying crews had passed and pounded breaks in the cable with rocks. The Japs simply followed the crews and cut cable almost as fast as it was put down. They finally were driven off or killed.

But the system was completed. More than 1,135,000 ft. of cable now are on order for the base. Seven large telephone exchanges are being built to supply an automatic dial system throughout the island. It has a complete teletype system with over 100 machines in operation, 3,000 telephones and more being installed daily.

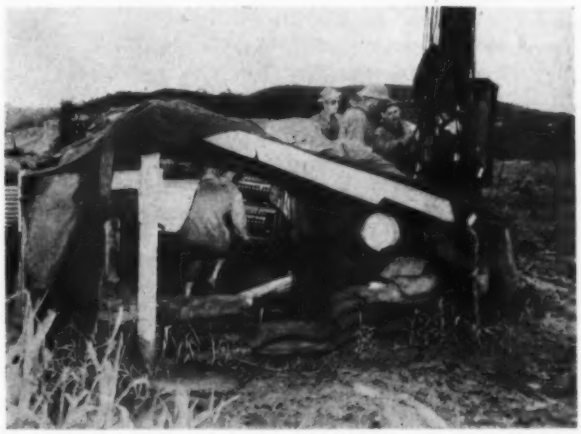
"Now," said one high-ranking officer, "officers and men of the Army, Navy, Seabees and Marines have good reason to 'whoop and holler' when they look back on the magnitude of this job they have accomplished."

Crews which installed the system represent over a century of telephone experience in civilian life, most of them with the Bell or associated telephone systems, as Lieutenant Hasse, who was with the Mountain States Telephone & Telegraph Co. 30 years before entering service; Chief Electrician's Mate Walter H. Hord, USNR, Wichita Falls, Tex., who spent 27 years with the Southwestern Bell Telephone Co.; Chief Electrician's Mate Reading L. David, USNR, Sierra Madre, Calif., with 17 years' service with the California Water & Telephone Co.

Some of the others are: Donald J. Morton, electrician's mate 3/c, USNR, Newhall, Calif., 10 years with the Southern California Telephone Co.; Thomas Lanyon, electrician's mate 3/c, USNR, Winter Haven, Fla., formerly of the Peninsular Telephone Co., Tampa, Fla.; Sam W. Waldrop, electrician's mate 1/c, Louisville, Ky., 15 years with Southern Bell Telephone Co., and Russell K. Davis, electrician's mate 1/c, USNR, 15 years in the records department of the Mountain States Telephone & Telegraph Co.

Maj. W. Shipe, USA, was with the wire division of the Union Pacific Railroad Co. many years; Robert W. Kemp, a civilian with the Army Signal Corps as an associate telephone engineer, was with the Associated Telephone Company, Ltd., of California.

• Close-up of PFC. JOHN DE BORDE, Malone, Ky., U. S. Army Signal Corps, handling a board in so-called Pacific "Whoop and Holler" telephone system. Signalmen had to team together in a month of imperiled work to give communications to invading American forces.



• PRIVATE DE BORDE sits on sandbags after pillbox "exchange" is flooded by storm. Linemen in background are cutting in new lines on higher ground. They faced other serious handicaps such as terrain, snipers, and salvaged but shrapnel-damaged cable and captured equipment.

• Army Signal Corps operators working three-position board. Left to right are: CORP. R. E. STEED of Ridgeland, Miss.; PFC. WALTER SHIFFER, Ephrata, Pa., and CORP. HORACE POUNDS, Magnolia, Miss. The Marianas' system was opened for business immediately after D-day.

THE PLANT MAN'S NOTEBOOK

BY RAY BLAIN • TECHNICAL EDITOR

ALTHOUGH many automobiles and trucks seen on the road today are rather old and dingy, telephone vehicles, in contrast, usually are found to be superior both in appearance and performance. This may be due to the awareness of the average telephone company to the value of preventive maintenance, and the realization that it is to its advantage to keep these vehicles in good condition at all times.

* * *

Many a true telephone story proves most embarrassing. A section lineman was out on toll trouble one Sunday morning. It was cold and his helper went up a pole and connected the leads from the test set on a convenient pair. The lineman, listening in on the test set, heard church music and yelled to his helper, "Get off that blankety-blank circuit. I hear music."

Unfortunately, this lineman's boss was listening to the church program being broadcast and recognized the complainant's voice. Early Monday morning, the lineman was called on the carpet and had a most difficult time. He promised to be more careful in the future and to refrain from profanity. He is still in the employ of the telephone company.

* * *

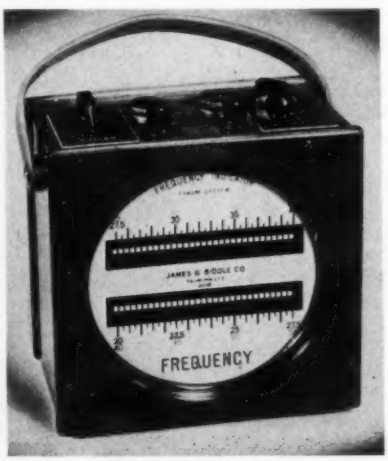
We are advised that the application of a new penetrating liquid to checked and cracked wire insulation renews its dialectric strength. It is expected that this, or some of the new plastics, eventually may be applied to paper insulation, thereby avoiding the labor and other expense of splicing on textile insulated tipping cables for connecting to main frames and terminals. This is a refinement that certainly will pay dividends in the telephone industry.

Tests recently completed by engineers of the Santa Fe Railroad in Chicago indicated that both AF and FM radio systems can be utilized satisfactorily in railroad communication. Both systems, the engineers stated, have certain advantages. A choice will depend on the economic, installation, operation and maintenance factors involved in individual projects.

The equipment tested made use of a development known as the "auto pulse" checking system in which a small light flashes in the locomotive cab every few seconds when the engine is within operating range of another radio equipped unit. This pulse technique, an important safety factor, is an adoption of a wartime identification development through which friendly aircraft can be identified automatically.

* * *

The vibrating reed type frequency meter is well known to the telephone industry where it has been used successfully for many years. This popular device, however, recently has been improved and new models have been made



available. It now may be obtained in miniature, panel mounting and portable types which will be found suitable for measuring frequencies from 10 to 500 cycles per second. These limits may be extended to cover special applications, if desired. The new design is accurate to within ½ of 1 per cent frequency at room temperature.

Frequency meters have numerous telephone applications, the most common of which is testing the frequencies of ringing generators when harmonic signaling is used. It always is much easier to maintain four-party service when the ringing frequencies are maintained accurately.

* * *

At a meeting of the Telephone Manufacturing Co., Ltd., in London, England, last July, it was announced that during the war years all of its energies had been confined to direct war work. Some of the principal items manufactured included 920,000 telephones and 70,000 switchboards of all sizes up to 200 lines.

* * *

Someone has suggested that possibly the helicopter eventually will be used to maintain cross-country aerial toll lines. Our guess is that by the time this method has come into use all toll lines will have been in underground cable.

* * *

The receptionist in the Veterans' Administration personnel office in Washington, D. C., James Thomas Key, lost both hands in a mid-air plane crash two years ago. Nevertheless, by the use of artificial hands, he answers the telephone, lights cigarettes and is a fine penman.

* * *

It is claimed many postwar small hand tools will be equipped with phosphorescent plastic handles. This should prove ideal for the trouble shooter who drops his pliers from the pole top at night.

"going automatic"
WGER automatic of course!

can—already have our order in with
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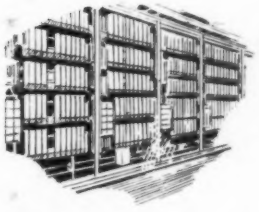
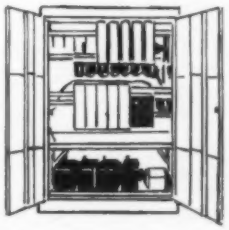
atic equipment? Please write us, or

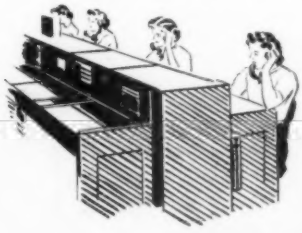
STROWGER AUTOMATIC
Performance Proved
TELEPHONE EQUIPMENT
can serve you in these ways:



CENTRAL-OFFICE EQUIPMENT—Economically provides every wanted service, on a modern scale, in exchanges of every size, and with maximum flexibility for meeting growth or change in traffic or stations.



COMMUNITY AUTOMATIC EXCHANGES — These unattended dial exchanges make small exchanges profitable, solve the "operator problem," and improve service on both local and long-distance calls.



TOLL SWITCHING EQUIPMENT—To meet every modern operating requirement. Speeds up toll service, improves toll line efficiency, saves operating costs.

PRIVATE AUTOMATIC BRANCH EXCHANGES—Provide your business subscribers with fast dial connections on local calls, and improved service on city and long-distance calls.

ELECTRIC

Machine Switching Automatic Dial Systems
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Possessions

33 W. Van Buren St., Chicago 7, U. S. A.
MATIC ELECTRIC CORPORATION

SAYS BELL SYSTEM NEEDS 6½ to 7 PER CENT EARNINGS

THE Bell Telephone System needs to earn at least from 6½ to 7 per cent on its total capital investment in order to attract from investors the large amounts of new capital required, according to Leroy A. Wilson, vice president of the American Telephone & Telegraph Co., in an article to appear in the forthcoming issue of the *Bell Telephone Magazine*.

Looking ahead for 10 years, Mr. Wilson foresees a possible new capital requirement for more than two billion dollars—nearly as much as the Bell System has had to obtain in the last 25 years.

There are many thousands of jobs ahead in the manufacture and installation of plant to provide new, more and better services for the public, Mr. Wilson points out. Included in the system's definite plans are such items as (1) taking care of the 2,000,000 presently unfilled orders for telephone service; (2) restoring plant margins to prewar standards; (3) adding another million telephones in rural areas to the million already in service; (4) expanding the program of fast and accurate dial service; (5) adding hundreds of thousands of miles of new long distance circuits; (6) creating a nationwide network of coaxial cables which will transmit television programs as well as telephone messages; (7) eliminating old telephone instruments and introducing new types; (8) greatly enlarging the scope of radio-telephone service and (9) providing for the normal future growth of the business.

"Earnings high enough mean that the Bell System can go forward and improve its service, increase employment, pay good wages, develop further ways and means of increasing the value of the service, and, in the long run, continue to reduce its cost," says Mr. Wilson. "Experience proves it. It is because the Bell System as a whole has obtained enough money to do its job well that it has been able to give its customers much more for their money."

The money invested in the Bell System, Mr. Wilson reports, has increased from about one and one-third billion dollars in 1920 to a total of more than four billion dollars at the end of 1944. About two-thirds of these four billion dollars have been invested by stockholders, who now number more than 680,000. The remaining one-third is borrowed money. It is upon this entire capital structure, composed of both stock and bonds, that the need for earnings of at least 6½ to 7 per cent is based.

Reviewing the history of Bell System service to this country, Mr. Wilson lists many specific improvements which have been brought about during the last 25 years.

The number of telephones nearly has tripled in that period, while population has gained only about 30 per cent. The average daily number of conversations handled by the system went up from 33,000,000 to more than 85,000,000, and conversations per person increased from about 160 to 280 per year.

Intercity telephone messages shot up from 360,000,000 to more than 1,500,000,000, and over the routes of the AT&T Long Lines Department the number of conversations increased seven-fold, from 25,000,000 a year to about 195,000,000.

Overseas radio-telephone service was introduced in 1927, and subsequently was extended to more than 75 countries.

Long distance service has been improved vastly in extent, speed of service and clarity of transmission. The scope and reliability of local service also has been improved steadily.

"Service is faster, more accurate, more dependable, more courteous as well as many times more extensive," says Mr. Wilson. "It is also 'more for the money.'

"Today, telephone service is being furnished at relatively less cost to the user than at any time in telephone history. Compared with rates of 25 years ago, Bell System customers are now saving $250,000,000 annually. Long distance rates are much lower than in 1920. The average station-to-station day rate between the 25 largest cities in the country is down from about $6.00 to less than $1.75. The transcontinental day rate for a station-to-station call has been reduced from $16.50 to $2.50. Overseas rates have been cut drastically since the service was opened in 1927.

"Just as important has been the great increase in the value of local service. One of the principal measures of the value of local telephone service is the number of other telephones in the exchange or area that each customer can call. In the 170 largest U. S. cities served by the Bell System, the average number of telephones the customer can reach by a local call has increased from 30,000 in 1920 to over 80,000 today, and the monthly cost to the residence customer, measured by each 1,000 telephones he can reach by a local call, has declined 60 per cent.

"The progress of the telephone in America has sprung from the initiative, the spirit of fair play, and the common sense of the American people. The opportunity for progress is enormous. The physical means and human skill are at hand to provide far more and better telephone service than ever before.

"Bell System people know how to turn the promise into performance, and they also know from experience that the key to success is full understanding of the whole process by all concerned—not only by telephone employes, but also by the public and by government authorities responsible for regulating telephone enterprise in the public interest."

V V

Lincoln T&T Manager Wins Bronze Star

Maj. B. I. Noble, former area manager at York for the Lincoln (Neb.) Telephone & Telegraph Co., has been awarded the Bronze Star for meritorious service in the Signal Corps in connection with military operations involved in the drive into Germany. The citation which credited him with planning the use of pyrotechnic and panel signaling, stated: "His energy, initiative and devotion to duty contributed in large degree to the success of the signal section."

Major Noble enlisted in the Signal Corps September, 1943, and has been overseas since June of 1944. At present he is stationed at Wiesbaden with the Army of Occupation.

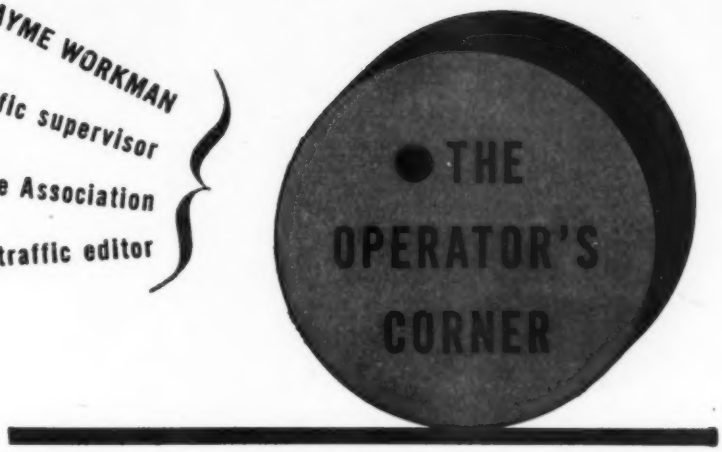
V V

Name Life Members of Canada Association

J. E. Lowry, Winnipeg, former commissioner of the Manitoba Telephone System, and A. M. Mitchell, Edmonton, former deputy minister and general manager of Alberta Government Telephones, both long active in executive capacities with the Telephone Association of Canada, have been named life members of that body.

W. H. Winter, Montreal, retired assistant to the vice president of the Bell Telephone Co. of Canada; J. H. Winfield, Halifax; G. J. Fraser, Saint John, and J. W. Delaney, Winnipeg, are also life members of the association, appointed by unanimous vote in previous years.

by MAYME WORKMAN
traffic supervisor
the Illinois Telephone Association
and traffic editor



ONE OF the problems confronting chief operators, particularly during the war era has been absenteeism. How often we would hear a chief operator remark, "I thought everything was all set for today and then three girls reported out and two others failed to show up." In an office already handicapped with a force shortage, this is a problem, indeed.

It is refreshing to find operators and supervisory people who take pride in a regular or perfect attendance record. Recently, an article appeared in the *Bell Telephone News* featuring the perfect attendance records, over a period of five years or longer, of 11 traffic employes in the state area. Among the group were several of the writer's friends. It is a pleasure to recognize their fine attendance records and those of the other traffic employes in the group by reproducing the article:

"Perfect Attendance? Simple: 'Well, attendance is sorta like dieting. The biggest part is making up your mind to do it.'

"The speaker was Gladys Johns, junior supervisor at the Dundee, Ill., office, housewife and holder of an unusually long record for perfect attendance on the job. She had been asked how she managed to accomplish it. Was she superhealthy and strong, her questioner added.

" 'Not any healthier than the average girl,' she replied, 'but when I took the job, I made up my mind to try not to miss.'

"Mrs. Johns is no phenomenon, like the pink avocado in your victory garden or a comet. There is a whole group of girls in state area traffic, who, like her, have not missed a day in over five years, most of them for much longer periods. There are 342 girls, in the same department, who have perfect records for over a year, many of them for two, four or five years.

"Resist Temptation to Stay Home: 'Weren't there ever days when you were tempted to stay home?' Mrs. Johns was asked. 'Of course,' she declared, 'many's the time I'd have loved to stay home and catch up on my housework! Or when there was a blizzard—it's seven blocks to the office. But I've always felt that if I'm going to do a job at all, I want to do it right, and I can't do it when I'm not there.'

"Ethel Stein, operator at the Cairo office, for many years 'Ethel-on-the-spot,' worked out a little system.

" 'On the days when I'd get up not feeling like working and think how swell it would be to stay in bed, I'd make myself try going,' she said, 'I could always come home, I figured, if I found I really was sick.'

" 'I take it, it worked,' her questioner prompted.

" 'Beautifully! Almost always, after I got to the office and my mind was on my work, I forgot about feeling punk.'

" *'No Mystery,' Says Dwight Girl:* Queried about the 'secret' of her record, Loretta Lawler, supervisor at the Dwight office, another of the over-five-years group, answered blithely, 'It isn't any mystery! I just went to work when I felt good, and I always felt all right!'

"Gentle probing, however, revealed that she was human. There had been mornings, she owned up, when she felt as much like going to work as the 'Reluctant Dragon' did to fight. She, also, followed the try-it method.

" 'I knew it would only be for a short while, because I work split-trick. I'd make up my mind not to baby myself and give it a try, at least. When I once started working, I was all right. Another thing, in our office there are only eight of us, and staying home means upsetting some other girl's plans for the day.'

"Then she added a punch-blow, 'Of course, since the war, I think every girl feels a patriotic responsibility to be on deck, don't you?' "

Other girls featured in the article, with a perfect attendance record of more than five years were: B. Frances Fettinger, service observing, Alton; Eleanor Broker, Itasca; Elsie Braun, Bensenville; Opal Ellis, Kankakee; Dorothy Holtz, Dundee; Mary McTaggert, Mt. Vernon; Louise Rettke, Oaklawn, and Hilda Childress, Centralia.

The perfect attendance record of these traffic girls should be an inspiration for others to emulate their example.

Questions from Illinois Operators

(1) When it is necessary to signal an adjacent operator to release a cord, how should the signalling be accomplished?

(2) What action should be taken after disconnecting a plug from a jack?

(3) What should an operator do when she cuts in on a call circuit to pass the calling or called number?

(4) Should toll switching operators report cases of operators' failure to listen before passing an order to their supervisor?

(5) Why should operators gauge the length of each ring when ringing on toll circuits?

Answers to these traffic questions appear on page 38.

V V

Southeast Missouri Company Converts Exchanges to Dial

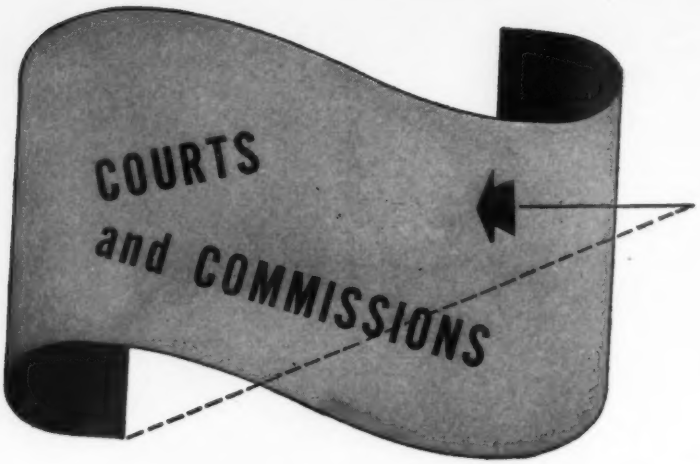
In anticipation of a large postwar increase in development of rural telephone facilities, the Southeast Missouri Telephone Co., Cape Girardeau, has announced a change-over from magneto to dial exchange service in two district communities, Holcomb and Wardell.

C. W. Boutin, company president, said that this is the first of a series of developments in rural service which will be expanded greatly as materials become available. At the present, he declared, at least 1,000 farm telephones could be installed if equipment could be secured.

V V

Manages Independent

ATHEL YOUNG is the new local manager of the Western Light & Telephone Co., Inc., St. John, Kan.



St. Louis News Service To Retain Telephones

Suspicion of bookmaking does not constitute evidence of law violation, the Missouri Public Service Commission ruled October 4 in ordering the Southwestern Bell Telephone Co. to continue telephone and private wire service to the Pioneer News Service, Inc., St. Louis establishment which disseminates horse racing information. (TELEPHONY, August 18, page 27.)

The telephone company had tried to discontinue service on the grounds that Pioneer News was using the above facilities for supplying its customers with information useful in the unlawful activity of bookmaking.

Neither horse racing nor giving racing information is illegal under Missouri laws, the commission stated, while acknowledging its own power to grant service discontinuance on actual proof of furtherance of unlawful enterprise.

Substantial proof that Pioneer News Service, Inc., was aware its customers were engaged in bookmaking and that its telephone and private wire service were knowingly used to further such unlawful occupations had not been given by the telephone company, the commission concluded.

V V

Michigan Commission Denies Reopening Petition

The Michigan Public Service Commission, after denying a petition of the Michigan Bell Telephone Co., Detroit, for the reopening of its hearing on telephone rates, announced November 9 that a decision on future rates would be made "probably within the next two weeks." (TELEPHONY, November 17, page 27.)

William J. McBrearty, commission chairman, said following the hearing on the petition in Detroit November 8 that the telephone company representatives conceded that the testimony they wanted to introduce would be largely speculative since it would be based on future developments.

The rate hearing was scheduled by the commission after the city, through the corporation counsel's office, petitioned for a reduction in rate charges of more than $7,000,000.

The utility is expected, however, to appeal the order to the courts, it was said.

V V

FCC Experiences Manpower Shortage

Electronic marvels promised within a few months of war's end are held up by a manpower bottleneck at the Federal Communications Commission, it was reported recently.

The commission hints at pending developments in micro-wave transmission of commercial messages and rural telephone service by radio, but says it can't process manufacturers' applications until Congress supplies more money to expand its staff.

V V

Sets Hearing on Nebraska Independent Rate Hike

Application of the Milburn & Anselmo Telephone Co., Merna, for rate increases at Anselmo, Brewster, Dunning and Merna, will be heard December 19 at Broken Bow before the Nebraska State Railway Commission.

Proposed rates for rural Dunning and Brewster are $2.25 a month. All persons interested have been invited to attend the hearing and present their evidence.

V V

Buys Oklahoma Independent

Darwin Farmer recently purchased the Fletcher (Okla.) Telephone Co. from his father, C. D. Farmer. He has been awaiting possible notice of induction into service, however, prior to assuming charge.

Minnesota Independent Asks Rate Increase

Hearing on the application of the Rollag Telephone Co., Hawley, for authority to increase its rates will be held December 12 before the Minnesota Railroad & Warehouse Commission. Present and proposed rates follow:

Class of Service	*Present Net Rates*	*Proposed Net Rates*
Dial		
Rural multi-party, residence	$1.15	$1.40
Country schools	1.00	1.25
Magneto		
Rural multi-party, residence	$1.00	$1.25
Country schools	1.00	1.25

V V

Says Need for Metallicizing Warrants Rate Increase

In a recent order, the Oklahoma Corporation Commission authorized Oliver Odell, manager of the Elmore City (Okla.) Telephone Co., to charge an additional 25 cents per month where semi-metallic service is furnished and an additional 40 cents monthly where full metallic service is rendered.

The order provided such additional charges might not be made against the subscribers until after metallic service was fully installed.

The commission based its order on the following findings:

"The REA gradually is extending its lines into the various rural communities. The major portion of the rural subscribers of Oklahoma is furnished rural telephone service through a grounded circuit. All of the applicant's rural service is furnished over a grounded circuit.

"Telephone service cannot be so rendered when there is outside electrical interference as will be caused by REA lines above or in close proximity to a grounded line. When outside electrical interference is encountered, the telephone operator either must abandon his service or metallicize his lines, the

latter requiring an additional investment of funds.

"In the instant application, all of the subscribers who would be affected were notified of this proceeding and none appeared to protest. In some instances, it will be necessary to metallicize only that portion of the line which is in close proximity to the electrical interference. The applicant refers to this procedure as a semi-metallic line."

H. W. Hubenthal, secretary of the Oklahoma Telephone Association, commented as follows: "While the element of additional costs may have been injected as a factor for rate making in other cases, this is the first time within my knowledge that an order of the commission has been issued specifically granting an increase because of necessity for making lines fully or partially metallic."

V V

Asks to Abandon Toll Circuit

The Ashland (Ky.) Home Telephone Co. petitioned the Kentucky Public Service Commission November 17 for permission to abandon a 19-mile toll circuit between Flemingsburg and Sharpsburg.

The petition stated there was not sufficient business to justify operation of the line and proposed to reroute service over a Southern Bell Telephone & Telegraph Co. line.

Hearing was set for November 26.

V V

Hear Lexington, Ky., Dial And Rate Hike Request

Application of the Lexington (Ky.) Telephone Co. for authority to install an automatic system will be heard this week before the Kentucky Public Service Commission with the city of Lexington likely to intervene in protest against a rate increase which the company seeks. (TELEPHONY, October 6, page 20.)

The Office of Price Administration and the city asked a delay September 25 in order to conduct an investigation and the city council indicated, at that time, it would join the federal agency in a protest.

V V

To Hear Plea for Line Extension, Rate Hike

Hearing of the Morgan Telephone Co.'s application to extend its lines from its headquarters at West Liberty, Ky., to Ezel was postponed November 21 by the Kentucky State Public Service Commission until December 17 in order to advertise its proposed rate increases and to notify the Office of Price Administration.

County Judge Lynn B. Wells, president of the company, said the extension would add 30 customers to the 315 it now serves and that the proposed increases would total about $1,000 a year.

Elie McGuire, president of the Ezel (Ky.) Telephone Co., wrote that he was blind and in ill health and accused the Morgan company of breaking down his company. He said he had offered to sell out for $750. Commission records showed Mr. McGuire has about 20 customers.

Judge Wells told the commission most of the Ezel company's lines and poles were down, but offered to appraise it and buy whatever he considered of value.

V V

Oklahoma Independent Gets Rate Boost

With the exception of the company's request for higher rural switching charge, the Oklahoma Corporation Commission November 21 granted the rate increases asked by the Winsted Telephone Co., Tyrone. (TELEPHONY, November 17, page 26.)

The company had sought an increase from 50 to 65 cents per month for rural switching service.

The new rates were to become effective on the next regular billing date.

V V

Two Independents Withdraw New Rate Requests

The Womer-Inavale Telephone Co., Inavale, has secured permission from the Nebraska State Railway Commission to withdraw its request for increased rates. (TELEPHONY, November 10, page 40.)

The commission also dismissed, for want of prosecution, the application of the Hooper (Neb.) Telephone Co. for authority to establish charges for long extensions of farm metallic circuits and long drops.

V V

Hear Nebraska Independent Plea for Higher Rates

Hearing on the application of the Firth (Neb.) Telephone Co. for an increase of 25 cents per month in telephone rent will be held before the Nebraska State Railway Commission December 28.

Any persons interested may have the opportunity to be heard at that time.

V V

Files for Incorporation

A certificate of incorporation for the Thorsby (Ala.) Telephone Co. on November 9 was filed at the probate office by Jack Capell, attorney. The company has a capital stock of $2,000, with $1,060 of this amount paid in.

Summary of Commission Rulings and Hearings

California Railroad Commission

November 9: Hearing on application of Delta Telephone & Telegraph Co., Courtland, for elimination of provisions for depreciation fund and returning such funds to general account.

Illinois Commerce Commission

November 27: Hearing on petition of eight individuals vs. Illinois Bell Telephone Co. and Illinois Commercial Telephone Co. for order requiring Illinois Bell to furnish them service through Gibson City exchange. Postponed from November 13.

November 28: Hearing on complaint of W. E. Urich against service of Harmon (Ill.) Home Telephone Co.

Kansas State Corporation Commission

October 30: Heard and advised application of R. J. Enyeart for permission to transfer franchise and cease operating Kingsdown (Kan.) Telephone Co.

October 30: Heard and advised application of Frances L. Wideman for certificate of convenience and authority to operate at Kingsdown.

November 5: Granted application of Denton (Kan.) Telephone Co. for certain rate changes.

November 19: Heard and advised complaint of Charles Smith against Cedar (Kan.) Telephone Co. concerning inadequate service.

November 19: Heard and advised application of Cedar (Kan.) Telephone Co. for permission to transfer franchise and cease operating there.

November 19: Heard and advised application of Farmers Cooperative Telephone Association, Kensington, for certificate of convenience and authority to do business of public utility.

November 19: Heard and advised application of Farmers Mutual Telephone Co., Gaylord, to operate as telephone exchange.

Louisiana Public Service Commission

November 28: Hearing on service improvements at Leeville Telephone Co., Golden Meadow, and failure of company to comply with commission's order of March 24. Postponed from October 5.

November 28: Hearing on penalties charged by Reserve (La.) Telephone Co. to telephone bills and alleged discriminatory practices in rendering service.

November 28: Hearing on discontinuance by Southern Bell Telephone & Telegraph Co. of service in territory of Louis Peranio, doing business as Star Telephone Co.

North Dakota Public Service Commission

November 28: Hearing on proposal to install dial service at Minot.

Wisconsin Public Service Commission

November 28: Hearing on proposal of Wisconsin Telephone Co. to establish exchange boundaries for Greenville exchange.

November 29: Hearing on proposal of Wisconsin Telephone Co. to establish boundary for West Bend exchange. Postponed from November 16.

USITA Explains Work of Bell Acquisitions Committee

An announcement pertaining to the acquisition of properties of Bell telephone companies by Independent companies was the subject of a recent member letter of the United States Independent Telephone Association. As this matter is of vital interest to the Independent industry, the USITA bulletin is published below:

Your association for many years has maintained a committee known as the Bell Acquisitions Committee. The primary duty of this committee is to keep advised of purchases and sales of telephone operating property as between the Bell System and the Independent owners.

Complying with an arrangement suggested in letters from the Bell company to the president of this association, written in 1922 and 1927, the Bell System since that time has notified this association whenever acquisition of non-Bell companies or property was contemplated.

Our Bell Acquisitions Committee raised with the Bell company the question of whether or not the Independents could expect a willingness on the part of the Bell System to sell property to non-Bell companies in an amount that would offset any purchase by Bell of non-Bell property. The Bell company's reply, written by Vice President McHugh, dated November 15, 1943, stated, among other things:

"Our companies have not made, and are unwilling to make any general commitment for the future with respect to the sale of Bell exchanges. Wherever Independent telephone men desire to purchase Bell System owned or controlled exchanges therefore, such requests should be made directly to the respective associated Bell company concerned, and *will be considered by that company on their merits just as such inquiries have been considered in the past.*" (Italics are ours.)

Believing the above information should be passed on to our membership, the directors of your association, at their meeting held in Chicago, October 2 and 3, 1945, adopted the following resolution:

"It is recommended that our entire Independent membership be advised, by member letter, of the willingness of associated Bell companies to consider bona fide requests for purchase of Bell property, as pointed out in Mr. McHugh's letter of November 15, 1943, and that this association stand ready to assist in such negotiations when it appears desirable. In view of the industry-wide implications of such negotiations, it also is recommended that Independent owners be requested to advise our executive vice president promptly of requests that may be made to associated Bell companies for purchase of Bell property or minority stock interests."

Buy Victory Bonds

MAJ. GEN. FRANK E. STONER (left) receiving Distinguished Service Medal from MAJ. GEN. HARRY C. INGLES, Chief Signal Officer of the Army.

General Stoner Receives Distinguished Service Medal

Maj. Gen. Frank E. Stoner, Chief, Army Communications Service, has been presented with the Distinguished Service Medal for "extraordinary leadership" in directing the expansion and operation of "the greatest world-wide communications system ever known."

The Army's Chief Signal Officer, Maj. Gen. Harry C. Ingles, made the presentation in a Pentagon ceremony attended by other high-ranking officers in the War Department.

The complete citation reads:

"Maj. Gen. Frank E. Stoner performed exceptionally meritorious and distinguished service in positions of great responsibtlity as Chief, Army Communications Branch, and later as Chief, Army Communications Service, Office of the Chief Signal Officer, from February, 1942, to September, 1945. During this period he displayed extraordinary leadership in the efficient operation and vast expansion of all phases of fixed communications of the Army. His responsibilities embraced the command, immediate direction and control of the greatest world-wide communications system ever known, in addition to the operation of all signal security, goniometric and intercept activities, and installations of army airways facilities. In a war which demanded more from communications than ever before, General Stoner played an important part by overcoming all obstacles in establishing a network which met every military necessity, displaying throughout his labors great vigor, unusual foresight and courageous pioneering."

At the peak of the military campaigns, army communications networks included more than 800,000 miles of radio-printer, radio broadcast, teletypewriter, cable and telephone circuits throughout the world, with a daily capacity of 100,000,000 words. The system was so fast and flexible that it was possible to send a nine-word message completely around the earth in 9½ seconds.

General Stoner had received numerous commendations from the President and other dignitaries for his work in providing special communications for the Big Three Conferences.

General Stoner, who has made the Army his career for 31 years, served in the Philippines during World War I. Immediately prior to his assignment to Washington in 1942, he was Signal Officer of the Fifth Army Corps and Third Army during the famous Louisiana maneuvers. He is a graduate of the Signal School, the Command & General Staff School, and the Army Industrial College.

V V

Honaman to Direct Bell Laboratories' Publications

R. Karl Honaman, Glen Ridge, N. J., has been appointed director of publication of Bell Telephone Laboratories, New York City, it was announced November 11.

He will have charge of the laboratories' technical publications, advertising, information for the popular and technical press, the magazine *Bell Laboratories Record* and other informational services.

V V

Making Line Improvements

The Humboldt (S. D.) Farmers Telephone Co. recently started making extensive improvements on its lines. Underground cable will be laid and all lines in town are to be rebuilt with new poles, at a cost of $2,500.

Colonel Parker Awarded Distinguished Service Medal

The Distinguished Service Medal was awarded to Col. Will V. Parker, in Philadelphia, Pa., on November 9. The award was made by Maj. Gen. Frank E. Stoner, Chief of the Army Communications Service, Office of the Chief Signal Officer.

The citation reads as follows:

"Col. Will V. Parker performed exceptionally meritorious service in a duty of great responsibility as Commanding Officer, Plant Engineering Agency, Army Communications Service, Office of the Chief Signal Officer, from February, 1943, to September, 1945. Through unusual ability, highly superior leadership and extraordinary devotion to a vital task he organized and directed a command of world-wide scope which engineered, provided and installed the equipment for a vast military communications system which contributed in important measure to the success of operations in all theaters. Despite formidable obstacles, Colonel Parker accomplished his mission in a manner which reflected great credit upon himself and the United States Army."

COL. WILL V. PARKER (right) is presented with Distinguished Service Medal by MAJ. GEN. FRANK E. STONER.

Colonel Parker was born at Graham, Tex. on December 16, 1884. He was commissioned a first lieutenant in the Signal Corps Reserve on January 21, 1918.

He was promoted to captain on February 12, 1919 and was honorably discharged on October 14, 1919. He was commissioned as captain in the Signal Corps Regular Army on July 1, 1920; was promoted to major on June 12, 1939; to lieutenant colonel (temporary) on April 18, 1941; to lieutenant colonel (permanent) on October 15, 1941, and to colonel (temporary) on February 1, 1942.

Upon being commissioned, Colonel Parker went to Little Silver, N. J. The following month, he went to France and went on duty in the Office of the Chief Signal Officer of the American Expeditionary Forces at the headquarters of the Services of Supply at Tours. He returned to the United States in September, 1919 and was honorably discharged the following month.

Upon being commissioned in the Regular Army, Colonel Parker became an instructor at the Signal Corps School at Camp Alfred Vail, N. J. In September, 1923, he went on duty in the Office of the Signal Officer in Washington, D. C. He went to Chicago, Ill., in February, 1925, for civilian communication study at various companies there.

Colonel Parker became an instructor at the Signal Corps at Fort Monmouth, N. J., in July, 1925. He remained on duty there until June, 1927, when he again went to the Office of the Chief Signal Officer in Washington as Chief of the Communication Division. He transferred to Fort Sam Houston, Tex., in November, 1931 as Assistant Signal Officer of the Eighth Corps Area. In July, 1937, he went to Fort Shafter, Hawaii, and was put in charge of all phases of wire communications there. In July, 1938, he became Assistant Hawaiian Department Signal Officer there.

Colonel Parker returned to the United States in October, 1939, and became an instructor for the 36th Division, Texas National Guard at San Antonio. In November, 1940, he went on duty at the headquarters of the 36th Division at Camp Bowie, Tex. In December, 1940, he became Assistant Division Signal Officer.

He went to Brownwood, Tex, in August, 1941, as Signal Officer for the Eighth Army Corps. He returned to the Office of the Chief Signal Officer in Washington in December, 1941 as Officer in Charge of the Wire Section of the Plant Division. He was placed in charge of the Plant Division in January, 1942. On February 1, 1943, he was made director of the Plant Engineering Agency, with headquarters in Philadelphia.

Coloner Parker received the Silver Star for gallantry in action and the Purple Heart for his services with the Signal Corps during World War II.

V V

Strike of Illinois Operators Ended By Compromise

The six-day strike of approximately 8,700 Illinois Bell Telephone Co. operators, including all Chicago toll operators handling suburban and long distance calls, involving a wage controversy ended November 24 at 6:10 p.m. when officials of the Illinois Bell company and representative of the Illinois Telephone Traffic Union came to terms.

The union-management settlement averted the threat of a nationwide strike by the National Federation of Telephone Workers with which the Illinois Telephone Traffic Union is affiliated.

Emergency service during the strike was handled by supervisory personnel of the company as soon as the operators left their switchboards. Calls from dial telephone to dial telephone were not affected, but emergency calls in manual exchanges or from dial exchanges to a manual exchange were completed.

V V

Canada Bell Officers Are Reappointed

Paul A. McFarlane, Montreal, vice president of the Bell Telephone Co. of Canada, continues as chairman of the Trans-Canada Telephone System for the ensuing year.

Reappointed to serve with him is R. V. Macaulay, assistant vice president of the Bell company, who has been acting vice chairman of the system, and who was confirmed in that office at the annual meeting held in Quebec City. R. W. Dickson of Montreal continues as secretary.

V V

Limits Special Services

The Nebraska State Railway Commission recently granted the Northwestern Bell Telephone Co., Omaha, authority to revise its rules and regulations concerning limitation of service offerings.

Field of Independent Telephony To Be Included in Manual

L. S. Uphoff, associate telephone engineer, New York Public Service Commission, and author of several articles published in TELEPHONY, has been named as one of the winners in the contest sponsored by the *Reader's Digest* with a view to collecting ideas

L. S. UPHOFF

for small businesses in which returning servicemen might engage. Mr. Uphoff suggested that the Independent telephone field be listed as an industry which offers ample opportunity for returning vets.

Engineer Uphoff, in a letter to TELEPHONY, states:

". . . I explained how many Independent companies there are, the magazines catering to the field, the state and national associations, etc. Also, I pointed out that the best way to become familiar with the details of the business (assuming a background of installation, testing and maintenance in the Signal Corps) is to seek employment with an Independent company."

The *Reader's Digest* announced that, when the stream of returning veterans is in full tide and the paper shortage has eased, it will publish a manual containing the best ideas received from contestants. The date of publication of this manual has not been issued as yet.

"It was my thought that you would be interested in knowing that the above manual, which undoubtedly will have wide circulation, will refer to the Independent telephone industry," wrote Mr. Uphoff.

V V

State-Wide Telephone Hookup Aids Wage Talk

Seventy-five Rochester, N. Y., retail merchants listened in on an outsize party line November 9 and the conversation was heard in 14 other cities at the same time.

Through a unique arrangement, in a meeting sponsored by the Retail Merchants' Council in the Chamber of Commerce, the group heard Industrial Commissioner Edward Corsi conduct a telephone quiz on provisions of the new retail trade minimum wage order.

While the Rochesterians listened to Mr. Corsi as he spoke from the Chamber of Commerce in Albany, N. Y., some 2,000 merchants in 14 other cities at the same time heard him discuss the directive, which went into effect November 12.

Roland O. Roberts, chairman of the Retail Merchants Council, who presided at Rochester's quiz participation, was seated at a table on which was a telephone through which Commissioner Corsi's voice was transmitted. Amplifiers made possible the reception of the speaker's voice.

At any time during the hour-long discussion, Rochesterians or any other listeners-in who had questions, merely had to pick up the telephone to be connected, at once, with the conference.

As a result, Mr. Corsi answered scores of questions from retailers who wanted clarification on the order. In describing to employers how the new minimum wage order is to affect their employes and their stores, replies, as well as the questions from listeners, were audible over all the network.

The two-way telephonic hook-up included Albany, Binghamton, Plattsburg, Newburg, Geneva, Ogdensburg, Watertown, Glens Falls, Jamestown, Rochester, Syracuse, Elmira, Poughkeepsie, Rome and Amsterdam.

Before the conference, the Rochester Telephone Co., through whose main exchange the calls were transmitted, conducted many tests to insure clear reception.

V V

Scharnweber Becomes Engineer For Nebraska Continental

M. P. Scharnweber, Bellevue, Neb., for many years a member of the plant and engineering departments of the Dakota Central Telephone Co., and recently on the research staff of the Glenn L. Martin Nebraska Co., has been appointed engineer for the Nebraska Continental Telephone Co., a company of the Telephone Bond & Share system.

Mr. Scharnweber is a native of Mitchell, S. D., and a graduate of Grinnell College, Iowa. He entered the telephone business in 1925, when he joined the Dakota Central Telephone Co. (now Northwestern Bell Telephone Co.) for which he worked successively as a member of the construction crew, groundman, lineman, chief clerk to the plant superintendent and as combination man in a large automatic exchange.

In 1934, he was appointed district plant supervisor of 13 exchanges, which position he held until 1940, when he was made supervisor for projects involving the conversion of small manual exchanges to automatic.

In 1943, Mr. Scharnweber resigned to take a position with the Glenn L. Martin Nebraska Co. as research man, a position which he held until his recent appointment as engineer with the Nebraska Continental company.

V V

>> Cecil B. DeMille remembers the time an off-the-beam "prop" man put a telephone on a table at Caesar's elbow during the making of a Cleopatra film.

COMING CONVENTIONS

Minnesota Telephone Association, St. Paul Hotel, St. Paul, January 28, 29 and 30, 1946.

Kentucky Independent Telephone Association, April 4, and 5, 1946. No hotel named as yet.

Nebraska Telephone Association, Paxton Hotel, Omaha, April 9 and 10, 1946 (tentative).

Iowa Independent Telephone Association, Ft. Des Moines Hotel, Des Moines, April 11 and 12, 1946.

United States Independent Telephone Association Executives' Conference, Edgewater Beach Hotel, Chicago, April 16 and 17, 1946.

Ohio Independent Telephone Association, Deshler-Wallick Hotel, Columbus, April 23 and 24, 1946.

Illinois Telephone Association, Pere Marquette Hotel, Peoria, May 8 and 9, 1946.

New York State Telephone Association, Hotel Onondaga, Syracuse, May 22 and 23, 1946.

Pennsylvania Independent Telephone Association, Lawrence Hotel, Erie, June 4, 5 and 6, 1946.

Michigan Independent Telephone Association, September 18 and 19, 1946 (tentative). No hotel named as yet.

United States Independent Telephone Association, Stevens Hotel, Chicago, October 14, 15 and 16, 1946.

New telephone building at Jefferson, Iowa.

Iowa Independent Completes $26,000 Building

Completion of the Jefferson (Iowa) Telephone Co.'s new $26,000 communications building recently was celebrated by veteran telephone people and company employes alike.

C. H. Daubendiek, secretary-manager of the Jefferson company, was host at a picnic which was attended by the following persons: W. H. Daubendiek, president, who has spent 56 years in telephone activities; Charles Cockerill, also with 56 years of service, who built the city's first telephone exchange; Ed Cain, who furnished the operating power with a gasoline engine; Mrs. Edna Brockway-Munn of Wauwatosa, Wis., the first operator at Jefferson, as well as linemen, office personnel and switchboard operators.

President Daubendiek told of the many hardships encountered in early days of line construction in Nebraska when telephones were viewed with some skepticism. He traced his career up to the present time when he and members of his family hold interests both in the local exchange and several other communities.

Following the dinner, guests were invited to go through the new building and to view the display of old time telephone equipment and pictures.

V V

Hold District Meeting At Sherman, Tex.

The second one-day district meeting, sponsored by the Texas Telephone Association and conducted by the Texas Telephone Co., Sherman, was held there November 9, 1945. Sixty-one persons registered, representing seven different telephone companies, as well as other businesses. The meeting was informal in scope, and was presided over by Sam H. Shutt, general manager of the Texas Telephone Co.

Morris S. Burton of the Gulf States Telephone Co., Tyler, Tex., was the first speaker on the program, having for his subject "Telephone Service into the Future." His talk dealt with traffic, commercial and plant, as well as some of the current problems of telephony and the newer findings growing out of the war.

F. P. Vogt, manager of the Quaker Oats Co., Sherman, presented a talk on the use of local and toll telephones pointing out the various ways the telephone was put into use by that company. He congratulated the telephone companies, as a whole, on the remarkably efficient job they did during the war when they were under terrific strain.

Mr. Shutt spoke on "Public Relations." The discussion of the importance of employes to the various phases of telephone work was comprehensive and showed how each employe had his or her own particular duty to perform. Order U-2 as issued September 22 was read and discussed.

As the talks were concluded, the guests were invited to ask questions on various points.

J. M. Crump, district traffic manager of the Southwestern Bell Telephone Co., Denison, Tex., who spoke on the subject of recruiting and training employes, the importance of each in his respective category and his relation to the telephone company employing him, was enlightening and interesting. He spoke at length on the inner workings of the traffic department, the placing and completing of calls and how it is done.

Oscar Burton, president of the Texas Telephone Association, was the last speaker of the meeting. He brought to those present an over-all picture of the association and telephone activities, as well as the problems faced during the war by the telephone companies, and the problems now rising.

The general opinion was that the district meeting should continue during the year.

V V

Northeastern Iowa Group To Hold Annual Meeting

The Northeastern Iowa Telephone Group, which is composed of small Indpent telephone companies of northeastern Iowa, will hold its first annual meeting December 6 in Plainfield, Iowa. The meeting will last one day and the program will include discussions on all phases of telephone operation, as it pertains to small companies. An operators' school is being planned and there will be addresses on commercial subjects.

A. C. Ruble, valuation engineer of the Iowa State Tax Commission, and his assistant, Jack Pinta, will assist at the meeting. A plan which involves the purchases of a large cable-burying machine by the group to be used by all members will be discussed. A cable splicing demonstration and an address on laying out a cable plant will be given. Entertainment and a dinner are being planned.

Election of officers for the ensuing year will be held. The present officers are: President, C. C. Pearce, Riceville; vice president, Floyd Hobbs, Plainfield and secretary-treasurer, Waldon Piehn, Alta Vista.

V V

Pennsylvania Independent Plans Dial Service

Improvement plans of the Tioga County Bell Telephone Co., Wellsboro, Pa., for next year include the installation of dial system there and the placing of new equipment in the company's new central office building, officials announced recently.

The new telephone exchange is expected to be in full operation by the latter part of 1946.

V V

Wills University $1,000

The University of Nebraska recently was bequeathed $1,000 from the estate of the late C. M. BRACELIN of New York, for many years general counsel and a vice president of the American Telephone & Telegraph Co., for the purchase of books for its law college. A native Nebraskan, Mr. Bracelin was graduated from that institution in 1902 and 40 years later was awarded an honorary LLD. degree.

Veteran Buys Telephone Stock; Succeeds Manager Atkinson

Edward G. Carlson of Nevada, Iowa, recently discharged from the Army Signal Corps, on November 6 became general manager of the Creston (Iowa) Mutual Telephone Co., succeeding George E. Atkinson, manager and plant superintendent who retired after being connected with the company for 45½ years.

Mr. Carlson has purchased a substantial interest in the company by buying the stock owned by Mr. Atkinson.

Entering the telephone business at Fairmont, Minn., in 1926, Mr. Carlson has had 16 years' experience in various phases of the industry. He began as a lineman in Fairmont and worked in all the departments of the telephone company there. In 1935, he was transferred to Nevada, Iowa, where he was made district manager of five exchanges.

He held this position until September, 1942, when he entered the Army Signal Corps, serving with Gen. George S. Patton's third army. He was overseas 18 months, being discharged October 27, 1945.

In Iowa's *Who's Who*, Mr. Atkinson is credited with the organization of the Creston Mutual Telephone Co., becoming its manager and secretary. He also is a director of the Iowa Independent Telephone Clearing House, a member of the Independent Pioneer Telephone Association; a member of the Telephone Pioneers of America; a director, a member of the executive board and past president of the Iowa Independent Telephone Association, and is listed as active in many other municipal affairs.

E. G. CARLSON

Treasury Department Condemns Rural Telephone Authority

The Treasury Department, in a letter written by Secretary of the Treasury Vinson to Chairman Lea of the House Interstate & Foreign Commerce Committee, condemns the recently proposed federal legislation providing for the creation of a Rural Telephone Authority, according to a recent bulletin of the United States Independent Telephone Association.

The USITA bulletin quotes Mr. Vinson's letter as follows:

". . . since the two bills would appear to involve substantial expenditures, they should be considered in the light of the heavy demands on the treasury which have grown out of the war and the prospect of further large demands growing out of postwar readjustments. The credit resources of the government must be conserved for those important purposes."

The telephone association then goes on to say:

"That is strong language. Secretary Vinson's letter, dated November 5, was in response to a committee request for an expression of the treasury's views. Earlier in the letter, the secretary voiced objection to making direct appropriations to government credit agencies, saying that such agencies should borrow from the treasury. The secretary also stated that the proposed interest rate of 1¾ per cent in HR 1278, 'is less than the computed interest rate on the public debt . . . and would in effect amount to a subsidy.' He expressed the opinion that interest on proposed telephone loans should be the computed rate of interest on the public debt plus a differential to cover administrative costs and potential losses. The secretary also stated that, if legislation is to be enacted, the preferable procedure would be to expand the functions of the REA."

V V

Lavaca, Ark., to Get Dial Service

The Lavaca (Ark.) Telephone Co. will install a Kellogg relaymatic central switchboard with a capacity of 200 lines within 30 days, it has been announced.

The new board, which will introduce dial operated telephones in Lavaca for the first time, will replace magneto equipment installed in 1914.

Lavaca, which has a population of 1,500, is near Fort Smith. P. H. Berkley is manager of the exchange.

V V

Erecting New Building

F. K. Noel, owner of the Grainfield (Kan.) Telephone Co., is erecting a new telephone building at the company's Grove, Kan., exchange.

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Rural Telephone Service

(Concluded from page 14)

60. Nearly one-fifth of the nation's farms had, at that time, an annual production of less than $250 and another 10 per cent of the total farms, mostly in the south, are farmed by sharecroppers and have a very low average annual value of products. Statistics indicate the economic factor to have about the same effect throughout the country, regardless of other factors involved.

Although not subject to proof, automobiles may have had, at one time and in certain sections of the country, the effect of retarding, to some extent, farm telephone growth. It would appear that the great value of the automobile to the farmer, both socially and in a business way, provides an additional service and not an overlapping one. This facility should not decrease telephone service, but rather coordinate with it.

Radio sets have become a necessity on the farm, both for information and entertainment. They unquestionably serve a real need in every home, but more especially in the farm home. Again, the radio serves in a field of its own and should not detract to any great extent from the value of telephone serice on the farm.

Rates, no doubt, effect more or less the use of rural telephone service. However, when rates were increasing in the 1910-1920 period, farm service also was increasing. In 1936, the difference in average monthly charges over the country as a whole to the farmers for telephone service was about $1.00 per telephone. It does not appear logical that a valuable service, such as only the telephone can provide, would be discontinued by the farmer in order to save $12 per year just because some other system or part of the country charged that much less a year. In most cases, the farmer can save considerably more than the cost of the service by a judicious use of that service.

The grade of telephone service furnished is and always will be an important factor in the growth or decline of rural telephone service. Conclusive data are not available as to the grade of farm service being given now or in the past throughout the country, but it is reasonably safe to assume that it varies over a wide range from excellent to very poor. The farmer cannot be expected to be satisfied with a poorly designed, carelessly maintained line, no matter how low his rate. If the telephone does not meet his needs and fails to give him the service he has a right to expect, then it is of little value to him and he resorts to other means. On the other hand, good service promotes complete satisfaction and continued growth in telephone development.

(To Be Continued)

V V

Illinois Commercial Plans Dial Installation

Harry Sewell of Marion, Ill., manager of the Illinois Commercial Telephone Co.'s Johnston City, Ill., exchange, recently announced that his company plans to have a new telephone exchange building constructed next fall.

The new building is to be of brick and steel construction, fireproof throughout and arranged to accommodate dial switching equipment. Mr. Sewell stated that new dial equipment will be installed in the building as soon as such equipment and associated materials are received. He said present conditions indicate that the new equipment may be installed and placed into service before the end of 1946.

LINEMEN and electricians who have used Vacuum Grip Pliers for years praise them for their many fine qualities—with the emphasis on Durability.

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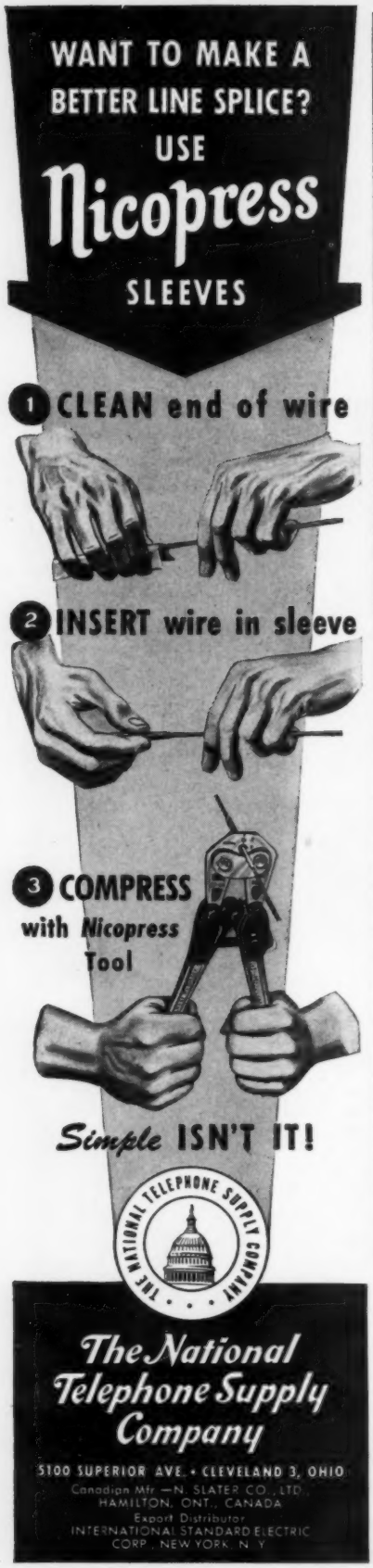
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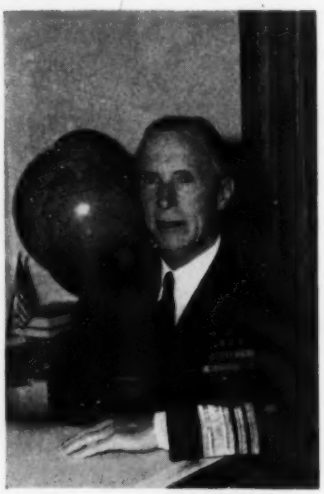
Adm. W. S. Anderson Becomes Gary European Director

Announcement has been made by A. F. Adams, president of Theodore Gary & Co., Chicago, that Vice Admiral Walter Stratton Anderson, USN (to be retired March 1, 1946), recently detached from the service as commander, Gulf Sea Frontier, and commandant, Seventh Naval District, has joined the Theodore Gary & Co. group, becoming active in its behalf November 1, 1945.



VICE ADM. W. S. ANDERSON

Admiral Anderson promptly will be elected a vice president and director of International Automatic Electric Corp., and also a director of Theodore Gary & Co., London, it was said. In the near future, he will proceed to London, where as European director of the Gary Group, he will take over work formerly handled by Rene Pleven, who now is minister of finance for the French government. Pending his departure for London, Admiral Anderson is familiarizing himself with the scope and activities of the Gary Group and his duties as European director.

Following the customary two years of sea duty after graduation from the United States Naval Academy in 1903, Admiral Anderson was commissioned an ensign and then received post graduate instruction in ordnance. In 1909, as lieutenant at the Naval Torpedo Station, Newport, R. I., he conducted tests on TNT before the Navy adopted that explosive for use in mines and torpedoes. Subsequently, he served as executive officer of the USS Des Moines and was at Tampico with Admiral Mayo at the inception of the Mexican campaign in 1914. Later, as ordnance superintendent of the New York Navy Yard, he supervised ordnance work on all classes of ships, including the installation on battleships of the earliest director fire systems.

Promoted to lieutenant commander in 1916, he served through World War I, first as gunnery officer and later as executive officer. During 1920, he served as officer in charge of the Navy Recruiting Bureau, New York.

After various assignments with the Pacific Fleet, Admiral Anderson served as head of the department of ordnance and gunnery at the Naval Academy. Later, with the rank of captain, he had command of the USS West Virginia, which held the battle efficiency pennant for the entire time of his command.

Admiral Anderson served as naval attache at the American Embassy in London from 1934 to 1937, and also as a member of the delegation to the London Naval Conference of 1935-36, at which time he was promoted to rear admiral. He was director of the Office of Naval Intelligence in Washington during 1939 and 1940. He also served as a member of a special intelligence committee with the director of Military Intelligence and the director of the Federal Bureau of Investigation.

During his next duty, that of commander battleships, Pacific Fleet, Admiral Anderson also commanded numerous task forces in the Pacific, and his flag was flying on the USS Maryland at Pearl Harbor when the Japanese attacked. From 1942 to 1944, he served as president of the Navy Board of Inspection & Survey, which was responsible for the preliminary trial, inspection and acceptance of vessels and aircraft added to the Navy during this period.

From July 17, 1944, to October 24, 1945, Admiral Anderson served as commander, Gulf Sea Frontier, and commandant, Seventh Naval District, with headquarters in Miami. On April 3, 1945, he was promoted to vice admiral.

Admiral Anderson is the author of various articles on naval affairs, published principally by the United States Naval Institute, and has received awards for his services to the United States and its allies.

V V

New Manager Takes Charge At Iowa Independent

Norman Ketelsen, Linden, Iowa, recently assumed managership and lineman duties for the Central Iowa Telephone Co. at Ocheyedan. He succeeded Robert Lee, who had been in charge since July.

Mr. Ketelsen, former staff sergeant in the Signal Corps, was honorably discharged from the armed forces on September 27. He had served 27 months overseas in the New Guinea and Australian area up to about a year ago, when he was returned to the states.

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Answers to Traffic Questions on Page 27

(1) The cord should be slackened and tightened alternately.

(2) The plug should be guided to the socket. Cords should not be dropped on the key shelf.

(3) The operator should listen carefully, so as not to interfere with other operators.

(4) Yes.

(5) This action should be taken to make certain to operate the signal at the distant office, and yet not give too long a ring.

Giles Appointed Manager Of Directory Company

Announcement has been made by A. E. Carlson, president of the Telephone Directory & Advertising Co., of the appointment of Vinton S. Giles as manager of that company, with headquarters in Fort Wayne, Ind. Mr. Giles formerly was advertising manager of the Philippine Long Distance Telephone Co., at Manila. In this capacity, he was responsible for all the advertising and directory work of that company.

Mr. Giles is a native of the United States, and went to Manila in 1927 with the Pacific Commercial Co., joining the staff of the Philippine Long Distance Telephone Co. in 1934. He was in Manila when it was occupied by the Japanese, and was placed in the Santo Tomas internment camp, later being transferred to Los Banos, where he was released by the United States Army in February, 1945. During his period of internment, Mr. Giles suffered great loss of weight and other hardships, but now has recovered from the rigorous life of the internment camp.

V V

» A flock of pelicans caused a 61-minute air raid alert in the San Francisco Bay area on June 27. The pelicans flew into a section guarded by radar and were reported as enemy airplanes.

V V

Gary Group Announces Organization Changes

A. F. Adams, president of Theodore Gary & Co., Chicago, has announced that, effective December 1, Theodore S. Gary became executive vice president of its wholly-owned subsidiary, Gary Services & Investment Co., and also was elected a vice president of other leading companies in the Gary Group. Gary Services & Investment Co. is the management coordination center and current investment medium of the Gary Group.

Mr. Gary now has his offices at 332 S. Michigan Ave., Chicago, reporting directly to Mr. Adams and his executive assistant, G. L. Grawols, and is in general executive charge of all Gary Group staff and coordination activities, working in close cooperation with Messrs. V. E. Chaney, W. J. Caverley

T. S. GARY

and F. S. Spring, the three other principal general executives in the Gary Group. Mr. Gary remains as a vice president of Automatic Electric Co., but relinquished, on December 1, his

W. S. CADWELL

duties as general manager of that company.

W. J. Caverley, president of Automatic Electric Co., has announced that, effective December 1, C. S. Cadwell, vice president of Automatic Electric Co., took over the duties of general manager under the title of vice president and general manager, and that H. F. Lello was advanced to vice president and general manager of the foreign and domestic selling affiliates of Automatic.

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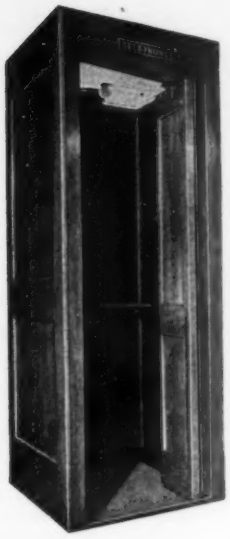

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High strength bronze conductor . . . expertly blended synthetic rubber insulation . . . soft, unbleached cotton braid, thoroughly saturated to provide a long-lived moisture-resisting covering.

A Quality Product Made by

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Habirshaw Cable and Wire Division

STROMBERG-CARLSON
PROGRESS IN TELEPHONY

STROMBERG-CARLSON COMPANY

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EVERSTICK ANCHORS...

FOR SPEED IN INSTALLATION

The exclusive Everstick nut housing locks the Anchor firmly on the rod. This speeds up installation. Plates are so designed, that they expand easily into undisturbed earth, and extra holding power is achieved. Made of tough, rust-resistant malleable iron. Write for bulletin.

EVERSTICK ANCHOR CO.
FAIRFIELD, IOWA

FOR QUICKER EASIER TRIMMING WORK
use SEYMOUR SMITH TOOLS...
TREE TRIMMERS
POLE SAWS
BRUSH CUTTERS
CABLE CUTTERS
JOINTED TEST-PIKE POLES
A line of tools designed for linemen's use that are standard equipment with the world's largest Utility Companies.
Send for folder and prices of this labor saving equipment.

SEYMOUR SMITH & SON, Inc.
900F Main St., Oakville, Conn.

ELLEN MATTHEWS with "the radio of the future," displayed October 17 at the Hallicrafters Co. preview of new radio equipment in the Stevens Hotel, Chicago, as an indication of the long range possibilities of electronics in the home. When finally developed, this radio is expected to answer doorbells, take and give messages, provide the means for pre-selection of radio programs, feature standard broadcasts, frequency modulation and television, automatically record and remind householders of birthdays and other special events.

Bell of Canada Plans $50,000,000 Expansion

Bell Telephone Co. of Canada will spend $50,000,000 over the next five years to extend telephone service to farm homes and rural areas throughout Ontario and Quebec and to carry out deferred maintenance, company sources revealed. Extensive surveys and studies now are under way in connection with this program.

For 1946, the expansion program calls for gross outlay of $28,000,000, $9,000,000 of which is to be for equipment on subscribers' premises. At present, Bell has some 80,000 unfilled requests for telephone service in its files. Therefore, major attention of the company for some time will be to provide equipment to reduce this order backlog.

Another $6,850,000 has been earmarked for "outside lines," for underground lines in various exchange areas, so as to permit a larger number of telephone service connections and take care of replacement of existing lines. $4,950,000 is to be spent on new central office equipment.

The company is planning an outlay of $2,170,000 on land and buildings in 1946. Included will be extensions to present buildings and new central stations. Immediate construction of new central offices at Verdun, Montreal, and Forest Hill Village, Toronto, has been approved and priority for other new buildings will be negotiated at Ottawa over the next year. A number of the new buildings planned for 1946, however, may not be fully equipped and operating before 1947.

Long distance extensions in 1946 will cost $3,000,000, under present planning. Important projects contemplated include underground cables between Lon-

JOHN BALLANTYNE, president of Philco Corp., lays the cornerstone of a new plant for the Storage Battery Division in Trenton, N. J.

don and Windsor, new connections between Montreal and Ste. Agathe, Quebec, and additions to cable service linking Montreal-Toronto-Ottawa.

For motor vehicles, a $1,660,000 expenditure is planned, calling for purchase of approximately 850 new cars, which will be mostly commercial vehicles.

V V

OBITUARIES

D. THORNTON CONROW, former assistant to the chief engineer of Indiana Bell Telephone Co., Indianapolis, died November 4 while visiting in the home of a friend.

A native of Moorestown, N. J., Mr. Conrow went to Indianapolis from St. Louis, Mo., where he started his telephone career as an engineer following graduation from Purdue University. He received a mechanical engineering degree from the school in 1909.

He served in various engineering capacities with Indiana Bell, retiring two years ago. He was for several years a member of the Hoosier State Chapter of Telephone Pioneers of America.

Survivors include his widow, a daughter, two brothers and a sister.

* * *

HENRY G. HENNESSEY, plant chief for the Crawfordsville district of the Indiana Bell Telephone Co., died November 9 at Lebanon of a heart attack. He was a member of the Bell Telephone American Legion Post No. 134.

* * *

WILLIAM F. KEENAN, 67, a veteran employe of the Rochester (N. Y.) Telephone Corp., died November 11, in St. Mary's Hospital. He had been in ill health for several months.

Mr. Keenan was with the telephone company for 37 years. In 1936 he retired, but was called back to his former position of storekeeper for the company during the war. He was a member of the Pioneers Club, the Holy Name Society of St. Augustine's Church and the Liederkranz Club.

Surviving are his widow, two sons, a sister, two brothers and five grandchildren.

* * *

MARLIN A. POWELL, 47, died November 13. He was born in Marlin, Tex., and had lived in Little Rock, Ark., for 36 years. He had been an employe of the Southwestern Bell Telephone Co. for more than 27 years. He was camp manager, representing the company at Newport Army Training School for 15 months and more recently had been record engineer at Little Rock.

Mr. Powell is survived by his widow, two sons, Marlin, Jr., of the Army Air Forces, and Dale of Chicago, a brother and two sisters.

* * *

EMIL C. OBERLE, 63, retired manager of the Eagle (Neb.) Independent Telephone Co., after 24 years of service, died at his home November 11 following an illness of six years.

Surviving are his widow, a son, two brothers and four grandchildren.

* * *

FRANK AUGUSTUS MILLERD, 60, a retired lineman of the Illinois Consolidated Telephone Co., Hillsboro, died November 18 at his residence there. In ill health for several years, Mr. Millerd fell at his home November 16, suffering head injuries which caused his death.

He had been an employe of the Illinois Consolidated company at Hillsboro since the age of 14 with the exception of two years spent in Springfield, Ill. He was line foreman of the company for many years before retiring because of ill health.

He is survived by his widow, and a son, Sgt. Frank H. Millerd, now in Japan with the armed forces.

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Test-O-Lite

TESTS ANY VOLTAGE...
100 to 550 Volts, A.C. or D.C.
Safely, Swiftly, Surely

THE NEON GLOW
LOCATES TROUBLE INSTANTLY

Indicates hot or grounded wires. Tells AC from DC. Far superior to ordinary clumsy test bulb. Indispensable in shop or home. The only pocket-size tester with PATENTED SAFETY FEATURE.

Life-time guarantee. List $1.50. Purchase thru electrical dealers. Pat. No. 1,778,883.

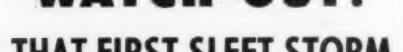
RTC-2 VINCENT RARE GAS RELAY

for harmonic or coded bells. Dual purpose device which economically improves both ringing and transmission on party lines. NO MOVING PARTS. Fully guaranteed. Can be installed in a minute.

L. S. BRACH Mfg. Corp.
55-63 Dickerson St. Newark, N. J.

WATCH OUT!

THAT FIRST SLEET STORM MAY CATCH YOU UNPREPARED

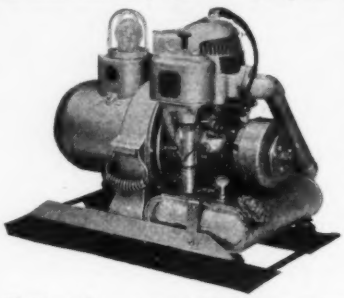


Remember last winter when the first sleet covered the lines . . . connections broken—wires down—service interrupted in many rural sections? Nicopress sleeves were the answer then. They will be the answer again this year. Be sure you are prepared. Order your Nico's today from Suttle. You'll get it quicker the Suttle way.

DEPEND ON SUTTLE

Homelite Produces Two New Generators

Production of two new gasoline engine-driven generators was announced recently by the Homelite Corp., manufacturers of portable pumps, generators and blowers, Port Chester, N. Y.



Designed as a portable power source for many uses, including electric tools, these units can be moved quickly to any location or job. They are ideal for emergency power or when power lines are inaccessible. Extremely portable, the Model 21D, a 2,000-watt, 120-volt DC generator, weighs only 105 pounds and the Model 21A, an 1,800-watt, 115-volt AC generator, weighs only 115 pounds. Both units have overall dimensions of 22⅜ x 17⅛ x 21⅛ ins.

Incorporating new design features developed for the Army and Navy and tested under actual combat conditions, these units are sturdy and dependable. The use of aluminum alloys for all large castings has permitted an increase in output without sacrificing portability, it was said. The single-cylinder, air-cooled, two-cycle engine has only one valve, a rotary disc type which is self-seating and requires no adjustment.

An improved wico magneto gives a strong spark for easy starting. The engine speed is controlled by an automatic built-in governor. A pressure-vapor oil system sprays a film of fresh oil over all moving parts with each revolution. The generator is direct-connected to the engine, with the armature mounted on the engine crankshaft.

V V

Former Kansas Manager Now Plant Supervisor

Cecil R. Diehl, former manager of the American Telephone Co., Hiawatha, Kan., recently returned as plant supervisor of the Hiawatha and Holton districts and one district in northern Missouri.

Mr. Diehl served in the Army Signal Corps and participated in the campaign in Germany before his recent honorable discharge. He was local manager at Hiawatha for eight years prior to 1940, a position now held by Fred Muench.

THE LINE IS BUSY!

We mean the Production Line at our Plant where every effort is being made to supply the demand for this masterpiece of seating comfort.

MODEL 2451

The operator's choice. One of two models. Adjustable in height. Rolled steel construction. Comfort speeds communication.

CRAMER *Posture* CHAIR COMPANY

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PREMAX

Metal Pole Markers Are Available

Premax Stamped and Embossed Metal Pole Markers are again available for Public Utilities. These lifetime Pole Markers cut identification costs and save labor.

Premax Products
Division Chisholm-Ryder Co., Inc.
4607 Highland Ave., Niagara Falls, N. Y.

Sales representatives of Stromberg-Carlson Co., Rochester, N. Y., who attended a recent session of the company's telephone sales force school include (seated, left to right): DONALD E. LEE, Rochester; JOHN R. HUBBARD, Chicago; ROBERT H. WALLACE, San Francisco; (standing, left to right): JOSEPH R. THOMPSON, Chicago; CHESTER J. REYNOLDS, Chicago; R. FRED FAIRLY, San Francisco; PETE WINEMILLER, Kansas City, Mo.; JOHN T. BARRETT, Rochester; HAROLD T. McCAIG, JR., Rochester; HAROLD T. McCAIG, SR., manager Chicago office; COLBY H. KNAPP, Chicago; (back row, left to right): WILLIAM LYON, Kansas City; CHARLES F. SANDERS, Chicago; RANDOLPH D. SHOEMAKER, Chicago, and WALTER E. CARLSON, Rochester.

Stromberg Conducts School For Telephone Sales Force

The Stromberg-Carlson Co. recently has been conducting a school for the telephone sales force at its Rochester, N. Y., factory. Held in two sections of two weeks each, the purpose of the school, according to Vice President Lloyd L. Spencer, is to acquaint new and veteran telephone representatives with the latest in communications techniques.

Chairman and school master is Truman C. Thompson, newly advanced telephone sales manager, who said, "During the war, the telephone sales division was reduced to a minimum. Salesmen were recalled to the factory and aided in producing instruments for the armed forces; they helped in the then-secret radar and other communications fields. The school is designed to review products made prior to the war and to acquaint the men with the many new warborn developments, concerning which demonstration and forum methods of instruction are being used.

"Under the direction of Vice President Frederic C. Young, the telephone engineering division, headed by Dr. Harry R. Reed, has carried the burden of instruction; this in addition to its regular work, which was augmented greatly by the sudden termination of the war. Sales engineers under Ralph H. Barger also assisted in the conduct of the course."

The school was addressed by Colby H. Knapp, telephone supply sales manager from Chicago, and representatives of manufacturers whose products Stromberg-Carlson distributes.

A final dinner session of the first section recently was held at the Rochester Club at which time the entire group, including officers of the company, heard of early experiences in the telephone field from Wesley M. Angle, chairman of the board. Lee McCanne, vice president and general manager, told the group about the five-year expansion plans for the company, which include the greatly enlarged new cabinet shop now nearing completion and the Radio City for WHAM broadcasting AM-FM and television, this building to house offices, technical facilities and studios capable of permitting audience participation of 400 persons.

Mr. Spencer acted as toastmaster and Arthur F. Gibson, assistant general sales manager, also attended.

V V

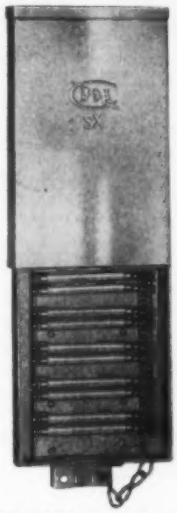
Seabees Drill For Oil At U. S. Top of World

At the northernmost tip of Alaska, five degrees north of the Arctic Circle and about 1,000 miles south of the North Pole, Seabees of the United States Navy are drilling for oil.

Right now 580 men are living in sub-zero temperatures at Fairbanks and at Umiat on the Colville River, where the first well is being drilled. Drillers already are down to 1,816 ft. Oil is expected to be struck at 3,000 to 5,000 ft.

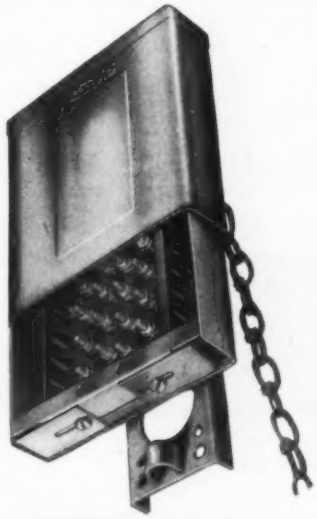
Coincident with the drilling of the first well a survey of the land between Fairbanks and Umiat No. 1 has been conducted to learn if a pipeline would be practicable and possible. This survey went north from Fairbanks to Livengood, thence to Yukon and north across the Koyukyk River, up the John River Valley and over the Endicott Range into Umiat, a 600-mile stretch.

COOK TERMINALS



TYPE SX (PROTECTED)

A small terminal to be used where protection is required. Made in 4, 5 and 6 pairs. Available with or without stub.



TYPE XB (UNPROTECTED)

Can be mounted top or bottom since cover will slip on either end. Made in 6, 11, 16 and 26 pairs. Available with or without stub.

Both types are carried in stock

BUCKEYE
TELEPHONE & SUPPLY CO.
COLUMBUS, OHIO

Philco Corp. Promotes F. W. Roth

Appointment of Frederick W. Roth as works manager of the Storage Battery Division of Philco Corp., Trenton, N. J., was announced November 15 by M. W. Heinritz, vice president in charge of the division.

Mr. Roth joined the accounting department of Philco in 1933 following his graduation from the Wharton School of the University of Pennsylvania. In 1938, he was named chief accountant of the Storage Battery Division and for the past four years has been office manager and chief accountant of the division.

V V

Sylvania Develops Cold Cathode Voltage Regulators

Three miniature cold cathode voltage regulators for 65 to 90-volt operation where currents range between two and three milliamperes and maximum voltage variation may not exceed three volts, have been announced by Sylvania Electric Products, Inc., Industrial Electronics Division, Boston, Mass.

Mounted in miniature polarized bayonet bases, the bulbs of these tubes are enclosed in a metal shield which is color coded for quick, visual identification.

The Syntron Co., Homer City, Pa., recently announced the appointment of J. A. ARMSTRONG as district manager of its sales and engineering service in charge of vibratory material, handling equipment for Michigan with headquarters at Lansing. He also will supervise the sale of Syntron portable electric tools and self-contained, gasoline hammers in the same area, excluding Detroit.

They are 1⅝ ins. over-all and ⅝ in. in diameter.

Used in series with a current-limiting resistor of approximately 15,000 ohms on the load side of a 175-volt DC source, they may be operated in any position. Two or more tubes of the same type may be operated in series for better voltage regulation.

Applications include cathode ray oscilloscopes, synchroscopes and other electronic instruments.

V V

dependable
Cedar Poles
MICHIGAN POLE & TIE CO.
NEWBERRY—GRAND RAPIDS
MICHIGAN

Cedar Poles
MAC GILLIS & GIBBS COMPANY
Wells Bldg., Milwaukee 2, Wis.
Northern White and Western Red
Cedar Poles—Plain or Butt-Treated

POLES

B. J. Carney & Co., 100 N. 7th St., Minneapolis, Minn.—Western red cedar poles. Pentrex Butt Treated or Plain.

C. M. Christiansen Co., Phelps, Wis.—Northern White Cedar Poles, plain or butt treated.

International Creosoting and Construction Co., Galveston, Texas.—Creosoted Southern Yellow Pine Poles. Plants: Beaumont and Texarkana, Texas.

T. M. Partridge Lumber Co., Minneapolis, Minn.—Northern White—Western Red Cedar Poles. Plain or butt-treated.

Pensacola Creosoting Company, Pensacola, Fla.—Creosoted Southern Pine. Poles of Superior Long Leaf Quality.

WE BUY
WE TRADE
WE REBUILD
Old telephones or parts into smart modern-looking wall phones or desk sets with new cabinets.
Repair service for Transmitters, Receivers, Desk Stands and Wall Phones—Magneto or Common Battery.
Specialists in Repairing and Rebuilding Transmitters
The Telephone Repair and Supply Co.
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WANTED TO BUY
Used Inter-communicating phones: Dictograph, Selectophone, Automatic Electric, Graybar, Tele-talk, and other popular makes. Los Angeles Telephone Signal Company, 1282 W. 2nd Street, Los Angeles 26, Cal.

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